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MASTER DISSERTATION

Submitted and defended by:

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An Investigation into English as a for Foreign Language Teachers' Attitudes and Learners' Perceptions toward Using Technology-Based Instruction in Enhancing Self-Regulation:

The Case of Master Students at Biskra University

Dissertation submitted to the Department of Language and English Literature in Partial Fulfillment of the Requirements for the **Master's Degree in Sciences of the Language**

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Declaration

I, "**Hibat Ellah Douaa HALILOU**", do hereby declare that this dissertation is my own original work that has been compiled in my own words. This work has not been falsified or used for other courses and examinations. Nor has another person, university, or institution for another degree or diploma previously, or concurrently, published it, unless explicitly acknowledged (In-text citation and the list of references).

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Dedication

In the name of Allah, Most Merciful, and Most Compassionate God's praise
and peace upon our prophet Mohammed

With deep love, this humble work is wholeheartedly dedicated first to
Myself— For the sleepless nights, the silent struggles, and the quiet victories no one saw.
For every moment I chose perseverance over giving up, and for holding on to the vision of what I could become. This work stands as a reflection of my resilience, growth, and unwavering commitment to personal and academic excellence.
May this achievement always remind me of what I am capable of when I trust the journey and believe in myself.

To my beloved parents — to the unbreakable wall, my father, and to the light of my life, my mother — whose unconditional love, endless support, and unwavering encouragement have been my guiding light throughout this academic journey.

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To my one and only sister who has been endlessly encouraging and always wished me success, Imane.
To my brother whom I cherish the most, Abderrahmane.

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To my friends, Maroua and Fatma —
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Abstract

Traditional instructional practices often limit learners' active engagement and self-regulation, which are essential for success in English as a Foreign Language education. In response, the integration of technology in language instruction has gained increasing attention for its potential to foster learners' autonomy and enhance self-regulated learning. This study aims to investigate teachers' attitudes and learners 'perceptions toward the role of technology-based instruction in supporting self-regulated learning. The study is grounded in the interpretivist paradigm and adopts a qualitative research methodology, utilizing a case study design. Data were gathered through a structured questionnaire administered to 30 Master 1 EFL students and semi-structured interview with 9 EFL teachers at Biskra University. This approach allows for a comprehensive exploration of learners' perceptions and teachers' attitudes toward the role TBI in supporting SRL. It examines how TBI is viewed in terms of promoting learner autonomy, motivation, and reflective learning strategies, while also identifying the perceived benefits and challenges related to its integration into language instruction. The findings revealed that learners view TBI as a supportive tool for managing their learning, developing autonomy, and increasing engagement. Similarly, teachers expressed favorable attitudes toward TBI, acknowledging its contribution to the development of learners' self-regulatory behaviors. However, they also identified challenges related to digital literacy and limitations in institutional resources. Based on these findings, the study recommends improving technological access, offering teacher training, and fostering a learner-centered digital environment to better support self-regulation through technology.

keywords: Autonomy, English as a Foreign Language (EFL), Self-Regulated Learning, Technology-Based Instruction

List of Acronyms

AI: Artificial Intelligence

APA: American Psychological Association

AR: Augmented Reality

BBC: British Broadcasting Corporation

BL: Blended Learning

CALL: Computer-Assisted Language Learning

EFL: English as a Foreign Language

ESP: English for Specific Purposes

ICT: Information and Communications Technology

LMS: Learning Management System

MALL: Mobile-Assisted Language Learning

MOOC: Massive Open Online Courses

SRL: Self-Regulated Learning

TBI: Technology-Based Instruction

TEFL: Teaching English as a Foreign Language

VLE: Virtual Learning Environment

VR: Virtual Reality

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Chapter Two: Fieldwork and Data Analysis

General Introduction

1. Background of the Study

The integration of technology into education has significantly transformed teaching and learning, reshaping not only how content is delivered but also how roles are distributed between teachers and learners (Selwyn, 2012). At the center of this transformation is the concept of self-regulated learning (hereafter SRL), which refers to learners' ability to actively manage their cognition, motivation, and behavior to achieve academic goals (Zimmerman, 2002). SRL involves essential skills such as goal setting, strategic planning, self-monitoring, and self-reflection, all of which are critical for fostering independent and effective learning (Panadero, 2017). In today's digitalized learning environments, these skills are increasingly indispensable, as students must adapt to flexible, self-paced modalities that demand a higher degree of autonomy (Winne & Hadwin, 2008). Traditional teacher-centered approaches often do not provide the scaffolding needed for developing such autonomy, while technology-enhanced instruction offers tools that can support and cultivate SRL (Dabbagh & Kitsantas, 2005).

In this context, technology-based instruction (hereafter TBI), which incorporates learning management systems, mobile applications, multimedia platforms, and artificial intelligence has been increasingly associated with fostering SRL. The adoption of digital tools, such as learning management systems, educational apps, and interactive multimedia resources, facilitates a more personalized and flexible learning experience, opportunities for reflection and self-assessment (Kirkwood & Price, 2014; Nicol & Macfarlane-Dick, 2006). These tools provide students with opportunities to set individualized goals, track their progress, and engage in meta-cognitive reflection. Moreover, technology enables real-time feedback and data-driven insights, allowing students to adjust their learning strategies

based on performance outcomes. This continuous cycle of feedback and adjustment is critical for developing the meta-cognitive skills necessary for self-regulation.

Furthermore, TBI can foster a deeper sense of autonomy and motivation, key components of SRL, by offering students more control over the pace and mode of their learning. By engaging with technology, students can tailor their learning experiences to meet their unique needs, interests, and preferences, which can enhance intrinsic motivation by giving them control over how and when they learn (Lee & Hannafin, 2016; Kumar, 2021). The increasing availability of adaptive learning technologies and artificial intelligence also offers students the potential for personalized learning pathways, which further supports the development of self-regulation. As such, the intersection of TBI and SRL not only highlights the evolving nature of education but also presents an opportunity to enhance learning outcomes by equipping students with the tools and skills necessary to become more effective, independent learners in the 21st century.

2. Statement of the Problem

Despite the growing integration of technology in educational settings, its effectiveness in fostering SRL remains contested and insufficiently explored. Numerous studies have highlighted the positive impact of TBI on promoting autonomy, motivation, and learners' engagement (Dabbagh & Kitsantas, 2005; Wang, Shannon, & Ross, 2013). These tools allow students to set goals, monitor progress, and adapt their strategies—core elements of SRL. However, other research emphasizes significant challenges that hinder the successful application of TBI, such as digital distractions, low levels of digital literacy, lack of structured guidance, and limited teacher training (Kirkwood & Price, 2014; Lai & Hwang, 2016; Lobos et al., 2024). These contradictions raise concerns about how effectively TBI is being implemented to support SRL across various educational contexts.

Moreover, while international studies have examined the relationship between TBI and SRL, there is a lack of research addressing this issue in Algerian higher education, particularly among Master 1 EFL students at Biskra Mohamed Khider University. The specific perceptions of learners and the attitudes of teachers within this context remain underexplored. Therefore, this study seeks to fill that gap by investigating how TBI influences learners' SRL and by identifying the conditions that facilitate or hinder its effectiveness in this local academic environment.

3. Aims of the Study

This study aims to investigate the impact of TBI in enhancing SRL among learners, particularly in the context of English language education. The research aims to examine how both students and teachers perceive the integration of technology in fostering SRL, identify the benefits and challenges associated with its use, and offer recommendations for optimizing technology's role in supporting the development of SRL skills.

Thus, the current study attempts to :

- Inquire students' perceptions towards using TBI in developing SRL skills.
- Investigate teachers’ viewpoints on the role of TBI in fostering SRL.
- Identify the benefits and challenges of using TBI in enhancing SRL.
- Provide recommendations for optimizing the use of technology in fostering SRL among students of English.

4. Research Questions

This study aims to address the following research questions:

1. How do Master 1 EFL students at Biskra University perceive the use of TBI on their self-regulation?
2. What are the teachers' attitudes towards the impact of TBI in fostering learners' SRL?
3. What challenges and benefits do teachers and students encounter when using TBI to enhance SRL?
4. What strategies can be implemented to optimize the use of TBI to promote SRL?

5. Hypotheses

Based on the research questions, the study formulates the following assumptions:

1. Technology-based instruction positively influences students' self-regulated learning by enhancing their autonomy, motivation, and strategic learning behaviors.
2. Teachers perceive technology-based instruction as a beneficial tool for fostering self-regulated learning, but they also identify challenges related to its implementation.
3. Addressing the challenges associated with technology-based instruction can lead to improved self-regulated learning outcomes among master-one EFL students at Biskra University.
4. The effectiveness of technology-based instruction in enhancing self-regulated learning is influenced by factors such as digital literacy, student engagement, and instructional design.

6. Research Methodology for this Study

Given that this study focuses on describing a specific educational phenomenon which is the attitudes of teachers and learners' perceptions toward the impact of TBI on SRL, and considering the nature of the research questions and objectives, it is evident that the research is fundamentally descriptive. Accordingly, this study employs a qualitative research approach grounded in an interpretivist paradigm, which emphasizes understanding participants' subjective experiences and meanings within their specific context. Following Creswell's (2013) framework, qualitative research is well-suited for exploring complex educational phenomena by providing rich, detailed descriptions rather than quantifiable measurements. To deeply investigate how teachers and learners view the influence of TBI on SRL, this research adopts a case study design which enables the researcher to obtain an in-depth examination of attitudes and experiences of participants within this defined educational setting. This approach supports a comprehensive understanding of the issue through contextualized and interpretive analysis.

6.1. Population, and Sampling Technique

The study involved Master 1 EFL students and EFL teachers at Biskra Mohamed Khider University. A sample of thirty (30) students were randomly chosen to participate in the study. The level of the students is purposefully selected because the researcher assumes that Master 1 students have adequate proficiency level that allows them to use technology in foreign language learning. In addition to that, ten (10) EFL teachers from the Department of Language and English Literature were selected using purposive sampling to be interviewed to achieve valuable insights about the influence of TBI in enhancing learners' SRL.

6.2. Data Collection Tools

For the purpose of data collection, two specific tools have been selected. Firstly, a structured questionnaire has been administered to the students, aiming to gather and assess their perceptions vis-à-vis using TBI in fostering their SRL. Secondly, a semi-structured interview was conducted with the teachers to gain valuable insights into their attitudes, challenges, and experiences regarding the implementation of TBI. These data collection tools have been chosen strategically to provide a comprehensive and multifaceted understanding of the research area. The questionnaire provides a quantitative perspective from the learners' point of view while the semi-structured interview enables a more in-depth exploration of the teachers' insights and experiences towards employing TBI in fostering learners' SRL.

7. Choice of the Writing Style

This research follows the American Psychological Association (APA) 7th edition writing style which has been selected for its appropriateness to the field of Social Sciences, wherein this study is situated. An exception, however, has been made concerning the use of the text justification feature. This stylistic decision was agreed upon collaboratively between the researcher and the supervisor to ensure consistency and clarity in presentation.

8. Significance of the Study

This research will, hopefully, provide valuable insights into teachers' attitudes and learners' perceptions regarding the effectiveness of using TBI in promoting SRL among university learners. It attempts to contribute to a deeper understanding of how TBI impacts learners' self-regulation among Master 1 EFL students at Biskra University. By examining teachers' attitudes and learners' perceptions, this study will provide insights into the

effectiveness, challenges, and best practices of integrating technology to promote independent learning. The findings will help teachers refine their teaching strategies, inform institutional policies on digital learning, and guide learners in developing SRL skills. Additionally, this research can serve as a reference for future studies on educational technology and learner autonomy in similar academic contexts.

9. Structure of the Dissertation

The following outline represents the dissertations' organizational structure:

Chapter One the theoretical framework, combines TBI and Learners' SRL. It is divided into two sections: the first section provides a definition of TBI, an overview of digital tools—such as CALL, MALL, LMS, multimedia resources, MOOCs, social media, and mobile applications—that are commonly used to support language instruction. Additionally, the chapter examines instructional models like BL and the flipped classroom, their role in enhancing language education, and both teachers and learners' perceptions regarding their effectiveness, along with a review of existing research on technology integration in English instruction. The second section discusses theoretical frameworks of SRL, the impact of technology on SRL, and the challenges learners face in developing autonomous learning strategies, as well as examining teachers and learners' perceptions on self-regulation.

Chapter Two focuses on the fieldwork, detailing the research methodology, data collection methods, and the analysis. It describes the research design, sample population, and ethical considerations, followed by a presentation of the tools used: students' questionnaire and teachers' interview. Each tool is explained in terms of purpose, design, validation, and administration. The chapter then presents the analysis and interpretation of

the data collected, leading to a discussion and concludes with a summary of findings, study's limitations, and recommendations for further research.

Chapter One: Foundations of Technology-Based Instruction and Self-Regulated Learning

Introduction

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Chapter one: Foundations of Technology-Based Instruction and Self-Regulated Learning

Introduction

This chapter focuses on how technology supports English language education through TBI and SRL. It is divided into two sections. Section one defines TBI and outlines various digital tools, such as learning management systems, mobile applications, and multimedia resources that contribute to creating more engaging and effective language learning environments. It also explores how teachers and learners perceive the use of technology in the classroom and reviews research related to its impact on language instruction. Meanwhile, Section two delves in the concept of SRL, emphasizing how technology can assist learners in planning, monitoring, and evaluating their own learning. It also discusses the challenges they encounter in developing these skills and the role of teachers in providing support. Together, these sections aim to offer a clear understanding of how technology can enhance language teaching and promote greater learners' autonomy.

Section One: Technology-Based Instruction (TBI) in Language Education

1.1. Definition of Technology-Based Instruction (TBI)

Technology-based instruction (hereafter TBI) encompasses the deliberate incorporation of technological tools and digital resources into the teaching and learning process, with the aim of improving, facilitating, or transforming educational practices. It includes a range of teaching methods that use information and communication

technologies (ICTs), such as computers, multimedia, internet, and mobile devices, to enhance learners' engagement, independence, and accomplishment of learning objectives. TBI's goal is not only to enhance the way teachers deliver instruction but also to establish interactive, student-centered learning spaces that foster deeper understanding and digital literacy. According to Roblyer and Doering (2013), technology-based instruction refers to the utilization of computers and other technological tools to enhance teaching and learning processes, emphasizing its capacity to aid educators in attaining pedagogical objectives efficiently. In a similar vein, Almekhlafi and Almeqdadi (2010) stress that TBI integrates digital tools to improve teaching effectiveness and student engagement, offering learners access to a wide range of content and opportunities for collaborative learning. Mishra and Koehler (2006) argue that effective technology integration necessitates a harmonious blend of content knowledge, pedagogical understanding, and technological proficiency, as outlined in their technological pedagogical content knowledge (TPACK) framework. Additionally, Higgins et al. (2012) define TBI as the use of digital technologies to enhance and support the learning process, with a focus on personalized and adaptive instruction.

Collectively, these definitions emphasize that TBI is not just about using technology for the sake of it, but about purposefully utilizing it to enhance the educational experience and improve learning outcomes.

1.2. Overview of Digital Tools in Education

The advent of digital technology has revolutionized the field of education, particularly in the context of language learning. TBI encompasses a variety of digital tools and platforms that facilitate innovative teaching and enhance students’

engagement. In language education, TBI can manifest through several forms, including online learning management systems, educational apps, multimedia resources, and interactive platforms.

1.2.1. Learning Management System (LMS)

Platforms such as Moodle, Canvas, and Google Classroom enable teachers to create organized courses, share resources, and track students' progress. These systems offer a centralized hub where learners can access assignments, participate in discussions, and receive feedback. Research indicates that Learning management System (hereafter LMS) can enhance students' engagement by providing easy access to course materials and fostering communication between instructors and learners (Kumar & Chao, 2013).

1.2.2. Computer-Assisted Language Learning (CALL)

Computer-Assisted Language Learning (hereafter CALL) refers to the use of computers as a tool to facilitate language learning and learning of languages. Grammar lessons, vocabulary games, multimedia presentations, and pronunciation exercises are included in this category of TBI. CALL facilitates personalized, self-paced learning, which is especially useful for EFL learners, who may need additional time to understand language terms. It also supports immediate feedback and interactive content that enhances learners' motivation and engagement. In addition, CALL environments often provide multimodal feedback, which can be used to promote various learning styles through text, audio, and visual stimuli. According to Beatty (2013), CALL has changed the language learning landscape by providing students and teachers with accessible and flexible resources.

1.2.3. Mobile-Assisted Language Learning (MALL)

Mobile-Assisted Language Learning (hereafter MALL) incorporates mobile devices such as smartphones, tablets, and portable media players into language instruction. MALL enables learners to access educational content from any device and anywhere, giving learners the opportunity for ubiquitous learning outside of the classroom. Learners can participate in interactive language learning tailored to their proficiency levels through games like Duolingo, Babbel, or Quizlet. MALL promotes collaboration, collaboration, and gaming experiences, thus making language acquisition more obtainable and convenient. Kukulska-Hulme and Shield (2008) point out that MALL not only promotes autonomy and personalization, but also supports real-time learning activities such as recording pronunciation, participating in smartphone chats, and posting voice notes for peer feedback.

1.2.4. Mobile Applications

Language learning apps like Duolingo, Babbel, and Rosetta Stone are popular tools that offer learners the flexibility to study their target language at their own pace. These applications often incorporate gamification elements, which keep learners motivated and engaged. Studies have shown that mobile apps can significantly improve vocabulary acquisition and retention (Hsu & Ching, 2013).

1.2.5. Multimedia Resources

The use of videos, podcasts, and interactive media can enrich the language learning experience by exposing students to authentic language use and diverse accents. Tools like YouTube and TED-Ed provide a wealth of resources that can be integrated into lessons to enhance listening and comprehension skills. According to recent research, multimedia

resources can result in better language retention and understanding when used strategically (Mayer, 2009).

1.2.6. Collaborative Platforms

Digital tools like Google Docs, Padlet, and Flipgrid facilitate collaboration among learners, allowing them to work together on projects and share ideas in real-time. Such platforms encourage peer interaction and help build communication skills, which are crucial in language learning. Collaborative writing and discussion activities foster a supportive learning environment and bolster learners' autonomy (Hampel & Hauck, 2004).

1.2.7. Virtual Learning Environments (VLEs)

Technologies that create immersive learning experiences, such as virtual reality (hereafter VR) and augmented reality (hereafter AR) are emerging in language education. These tools allow learners to practice language skills in simulated real-world scenarios, enhancing their conversational proficiency and cultural understanding. Early studies suggest that VLEs can motivate learners and provide opportunities for experiential learning (Bailenson, 2018).

1.2.8. Gamification and game-based learning

Gamification and game-based learning represent cutting-edge approaches in education that utilize the motivating aspects of games to boost learners' engagement and learning. While both strategies seek to enhance educational outcomes, they have distinct differences. Gamification introduces game-like elements such as points, badges, levels, leaderboards, and progress indicators into non-gaming settings like

quizzes or classroom participation, while game-based learning employs specific games crafted for educational purposes.

In the realm of English as a Foreign Language (EFL) instruction, these strategies are increasingly popular for making language acquisition more dynamic, interactive, and enjoyable. Gamification enhances learners' intrinsic motivation by offering a sense of achievement, instant feedback, and a clear progression framework. For example, platforms such as Kahoot, Quizizz, Classcraft, and Wordwall transform traditional exercises into engaging challenges that can be tackled individually or in teams, fostering competition and collaboration. These tools are effective in reinforcing vocabulary, grammar, pronunciation, and reading comprehension within a fun and relaxed setting.

Game-based applications like Duolingo also incorporate gamification by providing rewards and progress indicators, motivating users to stay committed to regular practice. Research substantiates the effectiveness of gamification in boosting learners' engagement, participation, and motivation. Deterding et al. (2011) suggest that gamified elements resonate with learners' psychological needs for competence, autonomy, and connection, which are crucial for cultivating meaningful learning experiences.

Additionally, Su and Cheng (2015) discovered that learners in gamified settings exhibited greater language retention, focus, and eagerness to engage in classroom activities.

Furthermore, in EFL environments where students might feel anxious or reluctant to speak, games create a low-pressure setting that encourages risk-taking and

communication. To integrate gamification effectively, it is important to align game mechanics with clearly defined learning objectives and provide necessary support so that all learners can participate, regardless of their language proficiency. When applied thoughtfully, gamification can transform the classroom into an engaging and vibrant space that nurtures a positive attitude toward language learning and promotes lifelong learning habits.

1.2.9. Blended Learning (BL)

Blended learning (hereafter BL) is an educational model that integrates both in-person and online instruction. According to Smith and Baber (2005), it is an approach that combines conventional classroom teaching with online learning methods. Similarly, Colis and Moonen (2001) describe it as a synthesis of face-to-face and digital learning. The primary aim of BL is to address the limitations of traditional classroom setups and purely online education by incorporating various learning strategies. It empowers learners with greater autonomy, while the online component of BL offers flexibility in terms of time and location, aiding in their planning, preparation, and study habits. In addition, teachers also gain from BL, as it opens up avenues for creativity and engagement through diverse mediums.

The Covid-19 pandemic accelerated the exploration of BL and asynchronous learning in digital formats. As institutions move towards reopening, BL has rapidly evolved and is expected to continue as a vital component of teaching and learning. Furthermore, the digital transformation of education has altered traditional face-to-face interactions, which are increasingly being supplanted by technology. This shift has been positively embraced by the millennial generation, who are digital natives (Hasan,

2019). In summary, while the flexibility and convenience of online learning can be advantageous, they may also lead some students to feel isolated and disconnected.

Additionally, introducing technology into the classroom can occasionally result in distractions and reduced attention spans. To foster meaningful connections between students and teachers, cultivate a sense of community, and maintain high levels of motivation and engagement, it is crucial for BL to be thoughtfully designed. This may involve employing a variety of instructional strategies, such as project-based learning, collaborative activities, and regular check-ins to ensure that students feel engaged and supported throughout their educational journey.

1.2.10. Flipped Classroom

The flipped classroom is an innovative teaching model that utilizes digital technology to promote a more engaging and student-centered learning environment. Instead of traditional lectures delivered during class time, students first explore new concepts independently outside of class through videos, online readings, or interactive modules.

This approach allows learners to control the pace of their study, review difficult concepts multiple times, and better prepare for in-class activities. Classroom sessions are then transformed into interactive sessions focused on applying knowledge through discussions, collaborative projects, problem-solving exercises, and real-world case studies.

This shift not only deepens students' understanding but also encourages active participation, critical thinking, and the development of higher-order skills, such as analysis and synthesis (Bishop & Verleger, 2013). The flipped classroom model fosters

a more inclusive and engaging learning experience by providing opportunities for personalized instruction and immediate feedback from teachers.

However, its success heavily depends on the availability of reliable technological infrastructure, student motivation, and the ability of instructors to design effective digital content and engaging in-class activities.

Additionally, teachers must carefully assess and adapt their teaching strategies to ensure that students are effectively learning outside the classroom and are prepared to participate meaningfully during face-to-face sessions (Lage, Platt, & Treglia, 2000).

Overall, the flipped classroom represents a transformative approach in education, aligning with the digital age's demands and emphasizing active learning, collaboration, and student responsibility, which collectively contribute to improved academic outcomes and lifelong learning skills.

1.2.11. E-learning Platforms and Foreign Language Learning

Currently, we are witnessing an unparalleled technological revolution that is taking place worldwide, marked by rapid advancements and the extensive adoption of technology. This revolution has significantly altered human existence by addressing diverse needs and providing invaluable resources and tools that aid in achieving various goals.

Additionally, technology facilitates easy access to a vast array of information. The terms "E-learning" and "online learning" are often perceived as synonymous, but Bates (2005, p. 23) points out a distinction between the two. While "e-learning" can refer to any learning that uses computers or telecommunications, "online learning" specifically denotes learning that is conducted via the Internet and the Web. Recognizing this difference is

essential for effectively designing language learning programs that incorporate a range of computer-based and telecommunications resources.

As technology continues to evolve, e-learning is poised to play a pivotal role in foreign language education, offering a variety of tools and resources that may not be accessible in traditional classroom environments. Laachir (2019) notes that e-learning is frequently favored by students, as it enhances their development of various language skills, including communication and problem-solving skills, alongside the fundamental four language skills.

Moreover, the research indicates that most students, regardless of gender, age, or academic level, prefer e-learning over traditional methods, particularly in the context of language learning. The advantages of e-learning include the flexibility to study at one's own pace, access to a broad range of resources, and opportunities for collaborative learning. Students engage with a variety of e-learning strategies such as e-books, social media, virtual classes, e-learning communities, and cooperative learning experiences.

Furthermore, the findings suggest that students express high levels of satisfaction with e-learning, which is often utilized by those in traditional learning settings to supplement their education.

However, possessing adequate knowledge of how to effectively use technological tools during e-learning is essential, as limited technical skills can negatively impact the quality and equity of the learning experience. For instance, Solak and Cakir (as cited in Laachir, 2019) found that "the lack of face-to-face interaction between learners and teachers is one of the drawbacks of learning foreign languages through e-learning.

1.2.11.1. Social Media

Numerous social media platforms, including Facebook, Snapchat, WhatsApp, Telegram, Instagram, X, and others, have significantly simplified communication and the building of connections. These platforms allow individuals to engage with people from around the world and participate in groups for discussion and collaboration.

The widespread use of social media has positively influenced language learning among students, who are among the most active users of these sites, seamlessly integrating them into their daily routines. Students often use these platforms to share updates about their daily lives, feelings, and aspirations. In today's digital age, they are highly involved in various technology-assisted literacy activities outside of the classroom, such as texting, emailing, playing online games, and interacting through social networking sites (Zheng & Warschauer, 2017).

Furthermore, Sari (2019) suggests that social media can be an effective tool for promoting autonomous learning, which in turn enhances students' learning outcomes.

Therefore, it is advisable to leverage social media as a means of encouraging learners to improve their writing skills and nurture their creativity. Social media can indeed enhance student-centered learning and enrich language complexity in education by facilitating collaboration and information exchange. Language teachers can incorporate social media into interactive activities, while both teachers and learners may benefit from necessary professional development and training. This digital landscape also opens up avenues for extensive reading and vocabulary acquisition. E-learning specialists should organize awareness campaigns to highlight the advantages of online learning, mobile education, and blended teaching approaches (Muftah, 2022).

While social media is widely recognized for its positive effects on language learning and proficiency, some researchers, like Baldwin (2012), examine the potential negative impacts of these platforms on the interlanguage development of second language learners. Traditional teaching methods and learning strategies may not resonate with today's learners, who may resist them.

Hence, it is crucial to approach social media usage responsibly, with a focus on teaching students how to navigate the digital space safely and ethically. In other words, establishing clear guidelines and policies for social media use is essential to minimize the risks associated with online learning.

1.2.11.2. Moodle

Moodle is a highly regarded LMS that enjoys global recognition, primarily due to its open-source framework. It is particularly popular among institutions with limited resources because it is easily accessible and can be tailored with various add-ons and plugins to meet specific requirements. The platform’s success stems from its alignment with solid pedagogical principles and ongoing technological innovation, making it both flexible and personalized for diverse users across different regions (Manzanares et al., 2020).

Moreover, Manzanares, Sánchez, and García-Osorio (2020) highlight that LMSs like Moodle create collaborative digital environments fostering the development of metacognitive skills and enhancing learning experiences. These settings enable learners to build both conceptual and procedural knowledge while offering mental support for task completion.

Furthermore, the hypermedia resources available in LMSs facilitate SRL by allowing learners to plan, monitor, control, and reflect on their learning practices. Such approaches motivate learners to actively engage in their educational processes.

However, to fully benefit from these opportunities, a well-structured pedagogical plan is essential for effective curriculum development. Additionally, a primary goal for contemporary universities aiming to meet the challenges of the 2030 Horizon is to provide teachers with accessible tools for tracking learners' progress and performance.

In another study, Benadla and Hadji (2021) assert that distance education serves as a vital support for learners who are unable to attend traditional classroom settings, helping them achieve their academic objectives. The key features of distance education adaptability, flexibility, and a student-centered approach have the potential to enhance student interaction through various synchronous and asynchronous technological tools.

1.2.11.3. Massive Open Online Courses (MOOCs)

Massive Open Online Courses (hereafter MOOCs) are online educational platforms that provide free or affordable courses to a wide-ranging global audience, making high-quality education accessible from prestigious institutions and educators (Pappano, 2012).

These courses are notable for their ability to accommodate large numbers of participants simultaneously, often incorporating video lectures, interactive assessments, and discussion forums to enhance learning and engagement (Mason et al., 2013). MOOCs have transformed conventional education by broadening access to learning opportunities, overcoming geographical and financial obstacles, promoting lifelong learning, and facilitating worldwide knowledge sharing (Siemens & Tittenberger, 2009).

However, MOOCs also encounter challenges, such as high dropout rates and concerns regarding the effectiveness of online learning compared to traditional face-to-face instruction (Kizilcec, Piech, & Schneider, 2013).

Overall, MOOCs represent a significant evolution in higher education, providing flexible, scalable, and inclusive learning experiences for learners around the globe (Yuan & Powell, 2013).

1.2.11.4. YouTube

YouTube, recognized as the largest video-sharing platform globally, has become an influential resource for TBI because of its extensive collection of freely available, multimodal learning materials. In EFL setting, YouTube provides learners with genuine language input, varying accents, authentic communication experiences, and instructional content created by both teachers and native speakers. Channels like BBC Learning English, EngVid, Rachel's English, and EnglishAddict with Mr. Steve offer grammar tutorials, pronunciation lessons, listening exercises, and live Q&A sessions.

A significant benefit of YouTube is its flexibility. Learners can watch, pause, and revisit videos at their own speed, which supports personalized learning and repeated exposure to challenging concepts.

The platform also accommodates various learning styles; visual learners benefit from subtitles and gestures, auditory learners engage with spoken language, and kinesthetic learners can practice pronunciation and intonation.

Moreover, comment sections and community features promote interaction and learners' engagement beyond the conventional classroom, providing informal learning

experiences. A study by Alwehaibi (2015) found that students who utilized YouTube in EFL classes exhibited enhanced language skills, greater motivation, and increased self-confidence.

However, the sheer volume of content necessitates thoughtful curation by teachers to ensure suitability, linguistic correctness, and alignment with educational objectives. When leveraged effectively, YouTube not only acts as a valuable source of language input but also serves as a motivating tool that encourages learners to take control of their own language learning journey.

1.3. The Role of Technology in Enhancing Language Education

Language education has been greatly enhanced by technology, as it has made the learning process more convenient, adaptable, and engaging for learners. Thanks to the internet and mobile applications, they can easily access a wide range of educational resources at any time and from any location, which is particularly beneficial for those who are unable to attend regular classes (VerbalPlanet.com, 2023).

Artificial intelligence (hereafter AI) enhances personalized learning by adapting lessons to suit each learner's progress, enabling them to concentrate on areas that require additional practice (NYU Dispatch, n.d.; Harfst, 2025). Numerous language learning resources incorporate games and interactive exercises to maintain learners' enthusiasm and transform the learning process into an enjoyable experience. Online language labs and video chats enable them to engage in conversations with native speakers, enhancing their fluency and fostering a deeper understanding of diverse cultures (VerbalPlanet.com, 2023; Harfst, 2025).

Furthermore, engaging with podcasts, videos, and authentic content allows learners to encounter natural language usage and various accents, thereby enhancing their listening and comprehension abilities. Despite some obstacles, such as unequal access to technology for certain learners and the danger of over-reliance on digital resources, technology generally enhances language learning, making it more efficient, enjoyable, and accessible for numerous individuals.

1.4. Teachers' Attitudes on Technology Integration in English Instruction

Teachers' attitudes play an important part in the successful integration of technology into English education. A 2025 study investigated EFL teachers' perception regarding incorporating ICT at the postsecondary level. It underlined the importance of institutional support, such as modern equipment, adequate financing, and proper training programs, to enable efficient technological integration. Another study from 2024 investigated the association between English teachers' attitudes about technology and the extent of technology integration in the classroom. It discovered that teachers who have a good attitude toward technology are more likely to integrate it into their teaching practices. The study suggested that efforts should be directed toward reducing unfavorable attitudes through sufficient training and assistance. Technology integration has been recognized as a significant tool for developing language skills and promoting collaborative learning settings in higher education contexts. However, major barriers to technology use include limited training for teachers and logistical concerns.

1.5. Learners’ Perceptions on Technology in Language Learning

Students' perceptions of the use of technology in language learning have become an increasingly significant focus of research, given the essential role technology now plays in

contemporary educational settings. Many learners consider digital tools such as language learning applications, online platforms, and multimedia resources as engaging and beneficial for enhancing their language acquisition (Alqahtani, 2015). They often believe that these technologies boost their motivation and offer greater flexibility for independent learning (Chinnery, 2006). Nevertheless, some learners report challenges related to technical issues, insufficient digital literacy, or limited access to reliable internet, which can negatively impact their learning experience (Lai & Hwang, 2016). Overall, learners generally value the convenience and interactive nature of technological resources, though their perceptions are shaped by factors like prior experience, confidence in using technology, and institutional support (Stockwell, 2010). Gaining insight into these perceptions enables teachers to develop more effective strategies for integrating technology, ultimately enhancing language learning outcomes.

1.6. Review of Existing Research on Technology Integration in English Instruction

The integration of technology in English instruction has received a lot of attention from scholars, who have demonstrated that it can be used to improve language learning and teaching methods. Several studies have shown that technology can enhance learners' engagement, facilitate interactive learning, and provide access to authentic language use by multimedia resources, online exercises, and communication tools (Hockly, 2013; Warschauer, 2011). It also indicates that digital technologies support differentiated instruction, enabling teachers to tailor activities to individual learners' needs and proficiency levels. (Wang & Vásquez, 2012).

However, several challenges have been identified, including limited access to devices and reliable internet, a lack of digital literacy among teachers and learners, and

resistance to change within academic establishments (Kessler & Bikowski, 2010; Leffa & Rehm, 2016). In addition, studies show that the success of technology integration is largely dependent on effective pedagogical design and teacher training, emphasizing that technology can enhance rather than replace traditional teaching methods. (Chapelle, 2009).

Overall, existing research highlights the positive results of technology in English instruction, while simultaneously calling for technological implementation and continued support to maximize its impact.

Section Two: Self-Regulated Learning (SRL) and Technology

1.7. Theoretical Frameworks of Self-Regulated Learning

Self-regulated learning (hereafter SRL) is a crucial concept within educational psychology that highlights how learners take an active role in managing their own learning activities. A deep understanding of the theoretical frameworks surrounding SRL offers key insights into the ways learners set objectives, utilize strategies, track their progress, and reflect on their achievements. Numerous significant models and theories have emerged to clarify the intricate dynamics of self-regulation, each focusing on different aspects and processes that contribute to effective learning.

One of the most recognized frameworks is Zimmerman's Social Cognitive Model of Self-Regulation. According to Zimmerman (2000), SRL is depicted as a cyclical process comprising three interconnected stages: forethought, performance, and self-reflection. In the forethought stage, learners set goals and strategize, which creates a solid basis for their future actions. During the performance stage, they implement self-control techniques, such as sustaining concentration and monitoring their advancement. The final stage, self-reflection, involves learners evaluating their performance, interpreting feedback, and

modifying their strategies as needed. This model underscores the importance of self-efficacy and strategic, planning; highlighting that effective self-regulation is characterized by continuous, dynamic cycles of activity.

Expanding on this idea, Pintrich's (2000) model provides a more holistic view by merging motivational factors with cognitive and metacognitive strategies. Pintrich asserts that motivation—encompassing goal orientation and beliefs in personal value—interacts significantly with learners' cognitive strategies such as planning, monitoring, and regulation. His framework indicates that motivation affects how learners approach their tasks, influencing their persistence and the strategies they opt for. The interplay between motivation and cognition illustrates that self-regulation is not merely a cognitive function but is also strongly influenced by learners' beliefs, attitudes, and motivation.

Another notable perspective is offered by Winne and Hadwin (1998), who present SRL as a cycle of information processing. Their model suggests that learners continually establish goals, implement strategies, assess their progress, and adjust their methods based on feedback. This iterative process relies significantly on metacognition, which is the awareness and regulation of one's own thinking, and it stresses that self-regulation involves constant adjustments rather than a straight path. Their framework elucidates how learners effectively manage cognitive resources and adapt to challenges in real time, which is vital for successful learning in various situations. Across these models, certain fundamental elements consistently emerge. These include goal-setting and strategic planning, self-monitoring and self-assessment, motivation and beliefs in self-efficacy, reflection, and the adaptable regulation of cognitive and behavioral strategies. Collectively, these elements create a comprehensive understanding of SRL.

In summary, the diverse theoretical frameworks of SRL spanning Zimmerman's cyclical model, Pintrich's integration of motivation and cognition, and Winne and Hadwin's information-processing perspective provide valuable insights into the multifaceted nature of self-regulation. A grasp of these models allows teachers to develop targeted interventions that encourage autonomous, motivated, and effective learners. By fostering skills in goal-setting, strategic planning, self-monitoring, and reflection, teachers can empower learners to take greater ownership of their learning experiences, ultimately enhancing academic success and promoting lifelong learning capabilities.

1.8. The Impact of Technology on SRL Development

The advent of technology has dramatically changed education, playing a vital role in the development of SRL. The latter refers to the active involvement of learners in planning, monitoring, and assessing their own educational experiences. With the technological advancements**,** students now have a wide range of digital tools and resources that can help them to be more self-regulate.

One of the primary ways technology boosts SRL is by providing learners with immediate access to information and educational materials. Online platforms, educational apps, and interactive simulations empower learners to establish personalized goals, choose suitable strategies, and independently reflect on their progress (Winne & Hadwin, 1998). These resources foster learner autonomy and encourage individuals to take ownership of their learning journeys.

Moreover, Technology offers resources such as quizzes, analytics, and progress dashboards that assist learners in tracking their learning and receiving feedback. For instance, LMSs monitor learners' performance, allowing them to pinpoint areas for improvement. This prompt feedback enhances metacognitive awareness—a vital

component of SRL—by helping them recognize their strengths and weaknesses, enabling them to modify their study strategies accordingly.

Additionally, digital collaboration tools and social media facilitate peer interaction and cooperative learning, which can boost motivation and self-regulation skills. Engaging with peers encourages the setting of shared goals, monitoring group progress, and collective reflection core components of SRL development (Dabbagh & Kitsantas, 2012).

However, there are challenges to consider. Excessive reliance on digital tools can sometimes lead to passive engagement or distractions, hindering effective self-regulation. As a result, teachers must guide students in developing disciplined strategies to manage their digital environments productively.

In conclusion, technology plays a significant role in advancing SRL by promoting independence, delivering real-time feedback, and facilitating collaborative efforts. As digital tools continue to evolve, their thoughtful integration into education can help learners become more autonomous, motivated, and reflective in their learning pursuits.

1.9. Challenges Learners Face in Developing SRL Strategies

A study by Lobos et al. (2024) reveals that higher education learners face various challenges when trying to develop SRL strategies, particularly in BL environments. One significant obstacle is distraction, often caused from social media, entertainment technologies like television and gaming consoles, as well as the chaotic nature of virtual learning spaces. These distractions hinder learners' focus and complicate adherence to study schedules, requiring more effort and discipline.

Another major concern is emotional regulation; learners frequently report increased stress, frustration, and anxiety due to the greater autonomy in BL settings and diminished

support from instructors. These emotional struggles can lead to decreased motivation and procrastination.

Additionally, many learners encounter difficulties in developing essential digital skills, as they acknowledge that being proficient with online platforms and tools is vital for successful self-regulation. They also find it challenging to maintain a healthy balance between personal and academic responsibilities, which they believe is crucial for their overall success and well-being.

Finally, learners often neglect the evaluation phase of SRL, revealing a lack of training in metacognitive and self-assessment strategies that are essential for effective self-directed learning in digital environments (Lobos et al., 2024).

1.10. Teachers' Attitudes and Learners' Perceptions on Self-Regulation

Teachers and learners have different yet interconnected perceptions on SRL. As noted by Dignath-van Ewijk and van der Werf (2012), teachers generally acknowledge the significance of promoting SRL in their classrooms and tend to have a positive outlook on encouraging learners' independence and student-centered methodologies. Many teachers advocate for constructivist learning environments that empower learners to make independent choices, such as selecting tasks, establishing personal goals, and working at their own pace.

However, despite their supportive attitude towards SRL, numerous teachers feel uncertain about explicitly teaching SRL strategies like planning, monitoring, and evaluating their learning processes. The study indicates that while teachers recognize the value of developing SRL, their classroom practices often do not reflect this belief, largely due to insufficient training or vague instructional methods.

Furthermore, the research emphasizes the considerable impact of teachers' beliefs on their teaching behaviors; those who believe SRL should be explicitly taught are more inclined to integrate strategy instruction into their lessons.

In contrast, learners benefit most when teachers not only promote independence but also provide structured guidance to help develop self-regulatory skills.

Thus, bridging the gap between teachers' beliefs and their classroom practices through professional development is crucial. Equipping teachers with the skills necessary to scaffold and support learners' learning processes can facilitate a transition from teacher-led instruction to fostering more self-directed learners (Dignath-van Ewijk & van der Werf, 2012).

Conclusion

In conclusion, this chapter has provided the transformative impact of technology on enhancing English language education through TBI and SRL. The use of digital tools—such as LMSs, mobile applications, gamification, and virtual environments—has demonstrated significant potential in creating more immersive, personalized, and engaging learning experiences. These tools do not only facilitate the language acquisition process but also encourage learner autonomy and motivation. Additionally, the theoretical underpinnings and practical applications of SRL illustrate how technology can empower learners to take control of their learning through goal-setting, self-monitoring, and reflective practices.

Although challenges like digital distractions, limited access, and inadequate training persist, both teachers and learners largely view technology as a valuable asset in language education. Looking ahead, the effective adoption of TBI and SRL will necessitate careful planning, institutional support, and ongoing professional development to ensure that

technology truly enhances educational outcomes rather than serving as a mere superficial addition

Chapter 2: Fieldwork and Data Analysis

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Chapter Two: Fieldwork and Data Analysis

Introduction

The present chapter serves as the core of the study outlines the research methodology and data analysis procedures used in this study, which attempts to investigate teachers' and students' perceptions towards using technology-based instruction in enhancing EFL learners' self-regulation. It begins with an overview of the research design, the target population and sampling strategies, ethical considerations, and the data collection tools employed. The chapter then describes the administration process, the aims, and details of the two primary tools: the students' questionnaire and the teachers' semi-structured interview. After data collection, the chapter explains the analytical techniques applied for data analysis and interpretation. It concludes with a discussion and synthesis of the results, along with an acknowledgment of the study's limitations. This comprehensive overview offers a clear understanding of the research methodology and forms the foundation for the study's conclusions.

2.1. Review of Research Methodology

This review of the research methodology includes the research paradigm, approach and design, the study population and sample, ethical considerations in conducting the research, and the data-gathering tools.

2.1.1. Research Methodology for this Study: Choice and Rationale

2.1.1.1. Research Paradigm

According to Guba and Lincoln (1994), a research paradigm is a collection of ideas and procedures that direct the selection of research methodologies and data interpretation. In this study, the chosen research paradigm serves as the foundational lens through which the research is framed, guiding the development of the methodology and informing the

selection of the design, approach, and data collection methods. The interpretivist paradigm emphasizes understanding a phenomenon through the perspectives of those directly involved, acknowledging that reality is subjective and shaped by individual experiences. As such, it does not seek generalization but values the uniqueness of each participant's viewpoint, which may differ due to varied social and educational backgrounds. (Alharahsheh & Pius, 2020) Rooted in interpretivism, this paradigm aligns with the belief that reality is socially constructed and shaped by individual experiences and perceptions. Unlike positivism, which assumes an objective and observable reality, the interpretivist stance adopted in this research recognizes that teachers and students' attitudes toward the use of TBI in enhancing SRL are subjective and best understood through participants' personal accounts. This perspective directly informs the study's qualitative approach, emphasizing in-depth exploration and interpretation rather than measurement or generalization.

2.1.1.2. Research approach

Research approaches serve as foundational frameworks that guide the entire research process starting from the formulating of hypotheses to the selection of data collection and analysis techniques. In other words, research approaches provide structured guidance for conducting a study, covering all stages from framing research questions to collecting, analyzing, and interpreting data. Hence, choosing the appropriate approach is a critical decision, and it should align with the researcher's underlying philosophical assumptions. Three primary research approaches are commonly recognized: qualitative, quantitative, and mixed methods, each corresponding to different paradigms and research aims.

In light of the interpretivist paradigm adopted in this study, which emphasizes understanding subjective experiences, a qualitative approach has been selected. This approach is well-suited to the study's aim of investigating teachers' and students' attitudes

towards the use of TBI in fostering their SRL, as it allows for in-depth exploration of participants' perceptions, views and experiences.

2.1.1.3. Research Design

A research design serves as a structured plan that guides the study, ensuring it is both feasible and effective in addressing the research questions. Establishing a clear design is a critical step in the research process, beginning with identifying the main aims of the study and then selecting a suitable strategy to achieve them. There is no universally fixed design; rather, the design should align with the specific purpose of the research, commonly, referred to as the principle of "fitness for purpose." In essence, the research goals dictate the design, which in turn influences the chosen methods (Cohen et al., 2018).

Following this principle, the present research adopts a case study design, as it aligns with the goal of exploring teachers and students' attitudes towards the use of TBI in enhancing SRL. The case study design is widely recognized qualitative research design used to investigate a specific phenomenon within its real-life context, particularly in the social and life sciences or to gain an in-depth understanding of an issue or event within a clearly defined setting (Coombes, 2022). Case studies are especially valuable when researchers aim to explore the "how," "why," or "what" of a phenomenon, allowing for an in-depth contextual examination of complex issues as they naturally occur such as participants' perspectives within a specific educational setting. Thus, aligning with the study's aim to understand how TBI contributes to the enhancement of SRL, a case study design is adopted. By focusing on a particular group within a natural setting, the case study allows for a rich, contextualized understanding of the phenomenon.

2.1.1.4. Population and Sample of the Study

The population targeted in this study involved Master1 EFL students at Biskra University in the 2024–2025 academic year. This particular group was chosen due to their academic level, experience with TBI, and relevance to the research objectives.

A structured questionnaire was administered to a sample of thirty (30) students who voluntarily participated by completing an online survey shared through a link in their private Facebook group. The sampling method employed was non-probability sampling, specifically convenience sampling, as participants were selected based on their willingness and availability to engage.

Additionally, ten (10) EFL teachers from the Department of Language and English Literature at Biskra University were chosen for semi-structured interview. However, only nine (9) agreed to take part. Their input offered significant qualitative data on the role of technology in EFL instruction and its perceived effects on learners' self-regulation. The teachers were selected intentionally, considering their teaching experience and use of ICT in the classroom.

2.1.1.5. Ethical Considerations in Conducting Research

Throughout the research process, strict ethical guidelines were followed to ensure the rights, privacy, and dignity of all participants. Before data collection began, participants were informed about the study's aims and procedures, with explicit emphasis on voluntary participation. For the students' structured questionnaire, a consent statement was included at the beginning, guaranteeing anonymity and confirming that all responses would remain confidential and used exclusively for academic research.

Similarly, participating teachers were contacted beforehand and provided with detailed information about the study's purpose and how their interview responses would be utilized. Verbal consent was obtained, and they were assured that their involvement was

entirely voluntary, with the freedom to withdraw at any time without any negative consequences.

No personal identifying information was collected from either students or teachers, and all data were securely stored and used only for research purposes. The study strictly adhered to the ethical standards required in academic research involving human participants.

2.1.1.6. Data Gathering Tools

Data collection is a fundamental stage in any research process, as it provides the raw information needed to answer the research questions and achieve the study's objectives. In qualitative research, data collection typically focuses on gathering rich, descriptive insights from participants through methods that allow for flexibility and depth. The choice of data collection methods should align with the research approach, design, and paradigm to ensure that the information gathered is both relevant and meaningful within the study's context. Therefore, it is essential for the researcher to choose appropriate tools to obtain meaningful data. Among the commonly employed methods, namely, questionnaires, interviews, observations, focus groups, and tests; this study utilized a structured questionnaire administered to Master 1 EFL students and conducted semi-structured interview with teachers to gather in-depth insights.

2.1.1.7. Data Analysis Procedures

Data analysis is an iterative process conducted alongside and following data collection, employing statistical techniques for quantitative data and methods like coding, thematic (content) analysis, and narrative or grounded theory approaches for qualitative data to identify and interpret key themes and relationships (Cohen et al., 2018). Since this study adopts a qualitative approach, most collected data were qualitative in nature. Because this study employs a qualitative approach, all data gathered were inherently qualitative. The

researcher used a structured questionnaire for M1 students, where closed-ended, questions were selected to explore the TBI usage habits and perceptions of its impact on learners' SRL enhancement—and semi-structured interview with their teachers. The interview did not yield statistical data; rather, it enriched the questionnaire findings by uncovering teachers' detailed attitudes towards the use of TBI in enhancing learners' SRL. To clarify and organize these insights, the analysis is presented through thematic tables, graphs and pie charts.

2.2. Students' Questionnaire

2.2.1. Aim of Students' Questionnaire

To delve deeper into the topic of interest, a Students' Questionnaire was selected as a first research tool. It was designed to collect quantitative data investigating Master 1 EFL students' perceptions of TBI and its influence on their SRL processes. This method is a popular data collection instrument that facilitates the gathering of substantial amounts of information from a large number of participants in a relatively brief timeframe. Specifically, a questionnaire is a written tool that consists of a series of questions or statements, which respondents must answer either in their own words or by choosing from the provided options (Brown, 2001).

The main objective of this questionnaire is to assess the perception of EFL learners on the use of TBI in improving their SRL in language learning. Furthermore, it seeks to assess their engagement with digital tools in their academic environment, identify their perceived benefits and challenges of technology use, and evaluate how these tools support key aspects of self-regulation including autonomy, goal-setting, motivation, and self-reflection. By investigating these dimensions, the study sought to understand the role of technology in enhancing learners' ability to independently manage their English language

learning, providing insights into the relationship between technological tools and learner self-regulation in higher education contexts.

. The questionnaire was addressed to Master 1 students at the Department of Language and English Literature, who possess a sufficient level of proficiency to use technology in language learning and were chosen as the appropriate sample. To obtain in-depth and relevant results, the questions were carefully selected to provide valuable and necessary data to enhance the current study.

2.2.2.Description of Students' Questionnaire

The questionnaire used in this study was specifically created to collect data from thirty (30) Master 1 EFL students at Biskra University. The students' questionnaire began with a concise introduction that outlines the aim of the study, emphasizing the importance of the participants' contributions. Key terms were defined such as self-regulation, ICT, and technology-based instruction (TBI) to ensure shared comprehension. It was composed of three sections that incorporated a variety of question types. Including close-ended questions where the participants were required to provide dichotomous responses (i.e., "yes" or "no"), while others were multiple-choice questions that required them to select the most suitable answer from a series of provided options, and Likert-scale items to measure opinions and behaviors on a five-point scale.

The first section aimed at finding out the personal background information of our sample, it included four (04) questions related to gender, age range, experience with TBI at the university, and the frequency of using technological tools in their English studies. Second section was about learners' perceptions on TBI. It included seven (07) questions covering aspects such as the availability of technological resources in the department, learning preferences, frequently used digital tools, the teacher's use of ICTs, the perceived effectiveness of TBI, its benefits, and the challenges encountered while using it. Moreover,

the third section was mainly about technology and learners' self-regulation. It has composed of four (04) questions; among the questions, two were structured using a five-point Likert scale. These items examined students' frequency of digital tool use for learning management, their opinions on whether technology promotes autonomy, which methods best improve their self-regulation skills, and how much technology assists them in evaluating and refining their learning strategies.

2.2.3. Piloting and Validation of Students' Questionnaire

The questionnaire was pilot tested to verify its clarity, appropriateness, and relevance to the research goals. It was reviewed by three EFL teachers from Biskra University, who evaluated its content validity and offered constructive feedback. Modifications were made based on their suggestions, which improved the instrument's quality and reliability. This process enhanced the questionnaire's overall effectiveness, ensuring that the items aligned well with the constructs being assessed.

Furthermore, the questionnaire and the opinionnaire were administered in person to three Master one students. The purpose of the pilot was to detect any unclear or confusing questions, ensure that the responses aligned with the study's aims, and remove any repetitive items. Feedback from the students indicated that the questionnaire was well-organized, logically arranged, and featured questions that were easy to understand.

2.2.4. Administration of Students' Questionnaire

This questionnaire has been administered online using Google Forms, with the link distributed in a private Facebook group created exclusively for Master 1 EFL students. Access to the form was granted only to those students who voluntarily chose to participate. Data collection occurred over approximately eleven days, from March 6th to March 17th, 2025, during which thirty (30) students completed the questionnaire. Before responding, participants were informed about the study's purpose and consented to participate. They

were assured that their responses would remain anonymous and confidential, and that participation was completely voluntary.

This method of administration was selected for its practicality and the accessibility it provided for students. Although the online format allowed for quick and broad distribution, a limitation was the dependence on students' willingness to participate, potentially excluding those less active on social media or with limited internet access. Nevertheless, the responses gathered offered valuable insights into learners' perceptions of TBI in improving their self-regulation in EFL learning.

2.2.5. Data Analysis and Interpretation

Section 1: Personal Information

Item 1: Gender

Table 1

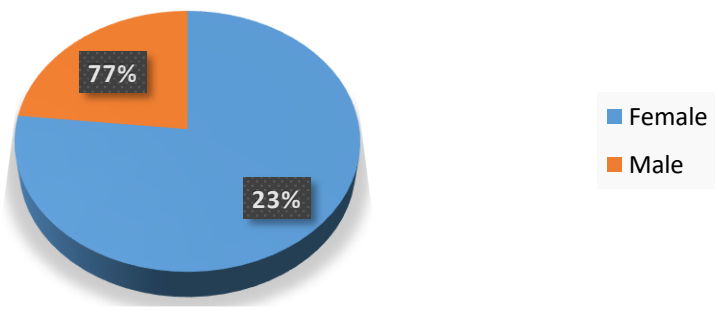
Students' Gender

Options	Number	Percentage %
Female	23	76.7%
Male	7	23.3%

Table (1) presents students' gender. The majority of students are females, constituting (76.7%) of the total number. However, only 7 students are males constituting (23.3%) of total participants. Figure (1) presents the answers:

Figure 1

Students' Gender



Item 2: Age Range

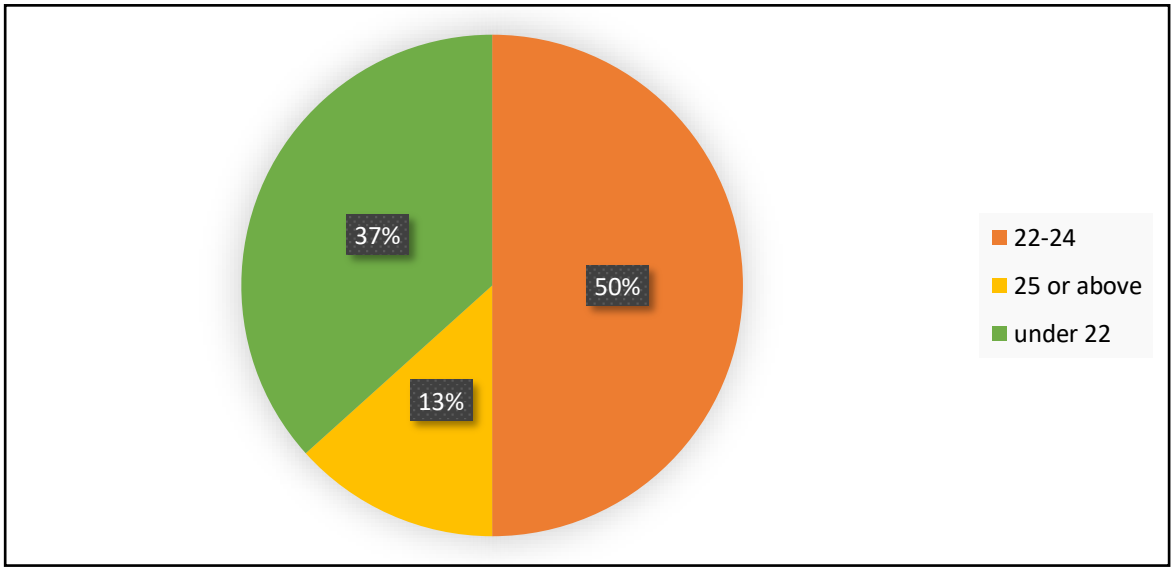
Table 2

Students' Age Range

Options	Number	Percentage %
22-24	15	50.0%
25 or above	4	13.3%
Under 22	11	36.7%

Table (2) presents students' age range. Half of the students (50%) fall within the 22–24 age group, (36.7%) are under 22, and (13.3%) are 25 or older. This distribution reflects a typical postgraduate student profile, with most students being in their early twenties. Figure (2) presents the answers:

Figure 2
Students' Age Range



Item 3: Have you used technology-based instruction in your English studies at Biskra University?

Table 3

Students' Usage of TBI

Options	Number	Percentage%
Yes	29	96.7%
No	1	3.3%

Figure 3

Students' Usage of TBI

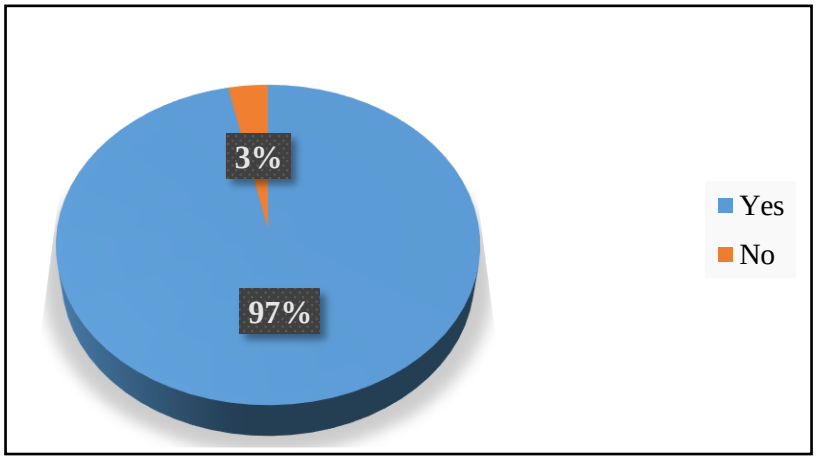


Table (3) presents students' use of technology-based instruction. A high percentage (96.7%) of students confirmed that they have been exposed to technology-based instruction, suggesting that digital tools are integrated into their educational experience. Only one student (3.3%) reported not using such methods. Figure (3) above presents the answers.

Item 4: How often do you use technology-based tools (e.g., Moodle, educational apps, online platforms) in your learning?

Table 4

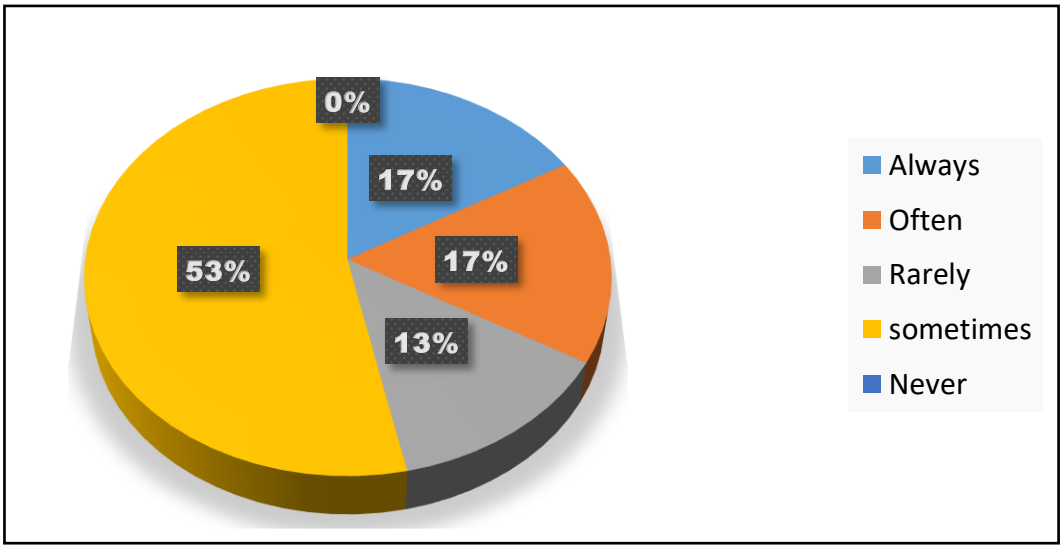
Frequency of Using TBI tools

Options	Number	Percentage%
Always	5	16.7%
Often	5	16.7%
Rarely	4	13.3%
Sometimes	16	53.3%
Never	0	0%

As the table and the figure show, over half of the students (53.3%) indicated that they use technology-based tools "sometimes," with (16.7%) opting for "often" and another (16.7%) selecting "always." A smaller portion (13.3%) reported using these tools "rarely," while no students responded with "never." This indicates a general tendency toward regular, though varied, use of technology among students.

Figure 4

Frequency of Using TBI tools



Section 2: Perceptions on Technology-Based Instruction

Item 5: Do you think that the Department of English Language and Literature at Biskra University is well-equipped with enough technological materials?

Table 5

Perception of Department's Technological Equipment

Options	Number	Percentage %
Yes	5	83.3%
No	25	16.7%

Figure 5

Perception of Department's Technological Equipment

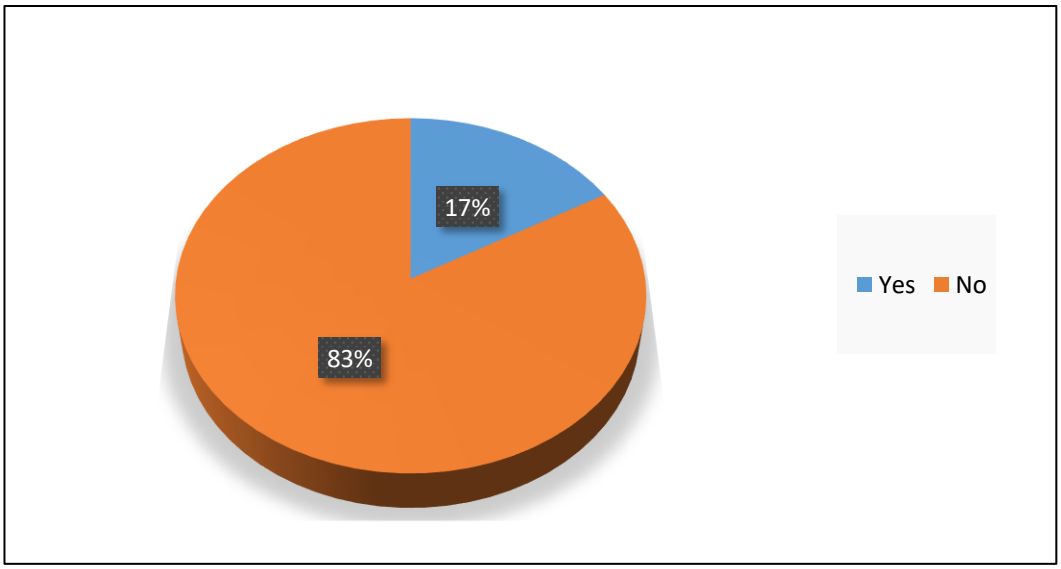


Table (5) shows that a majority of respondents (83.3%) indicated that the department is not well-equipped for TBI, whereas only (16.7%) felt that it is sufficiently equipped. This highlights a recognized deficiency in technological infrastructure as Figure (5) represents the answers.

Item 6: What do you prefer?

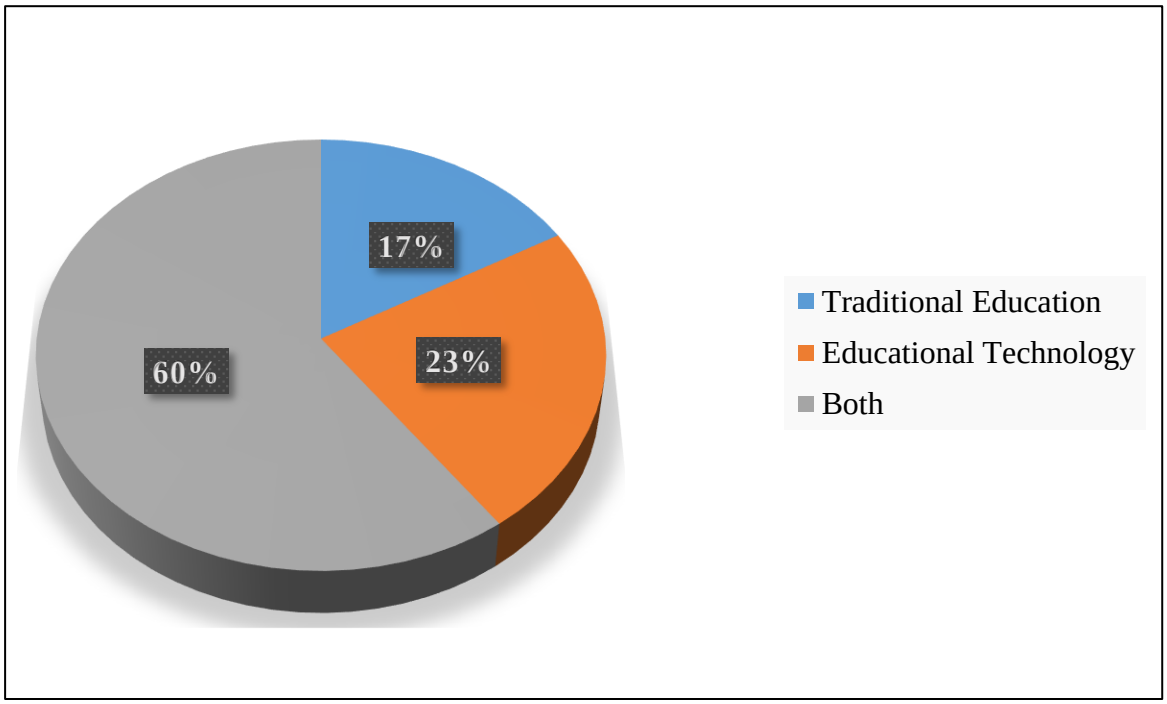
Table 6

Students' Preferred Mode of Instruction

Options	Number	Percentage%
Traditional education	5	16.7%
Educational technology	7	23.3%
Both	18	60.0%

Table (6) shows the results that (60%) of students preferred a blended learning approach that combines traditional and technological methods, while (23.3%) preferred fully technology-based instruction and (16.7%) opted for traditional education. This highlights a strong preference towards flexible, mixed-mode learning. Figure (6) represents the answers:

Figure 6
Students' Preferred Mode of Instruction



Item 7: Which technology-based tools do you use most frequently for learning English? (Select all that apply)

Table 7

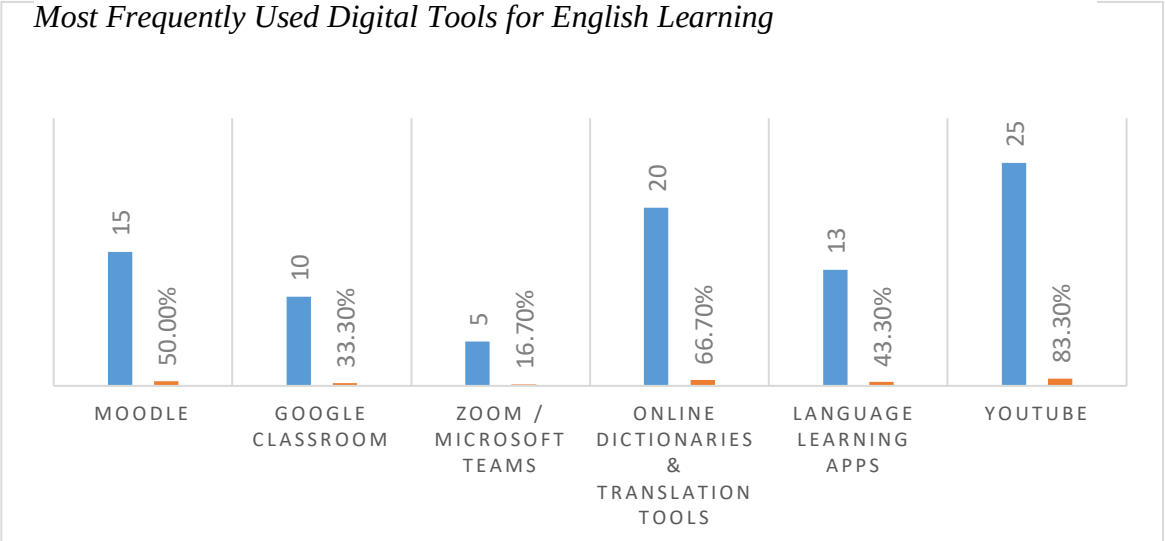
Most Frequently Used Digital Tools for English Learning

Options	Number	Percentage%
Moodle	15	50.0%
Google Classroom	10	33.3%
Online Dictionaries & Translation Tools	20	66.7%
Zoom / Microsoft Teams	5	16.7%
Language Learning Apps	13	43.3%
YouTube	25	83.3%

According to Table (7), YouTube (83.3%) and online dictionaries/translation services (66.7%) are the most common applications. Moodle (50%) and language applications (43.3%), Google Classroom (33.3%), and Zoom/ Microsoft Teams (16.7%) are among other common applications. Figure (7) represents the results:

Figure7

Most Frequently Used Digital Tools for English Learning



Item 8: How often does the teacher use ICTs and different teaching aids?

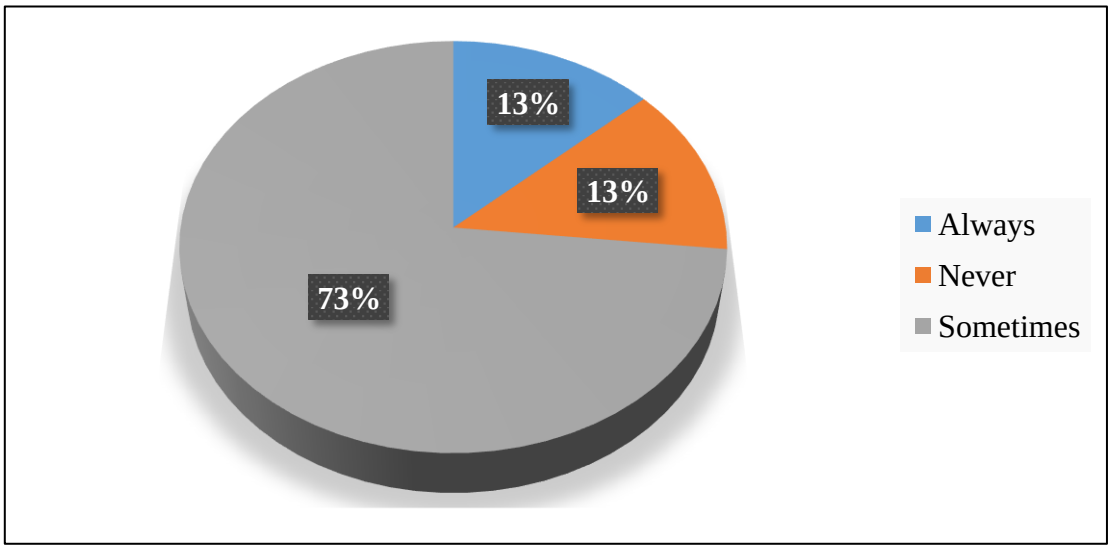
Table 8

Teachers' Use of ICT Tools

Options	Number	Percentage%
Always	4	13.3%
Sometimes	22	73.3%
Never	4	13.3%

Table (8) shows that a majority of students (73.3%) reported their teachers "sometimes" use ICT, while (13.3%; 4 students) each chose "always" or "never.". Overall, ICT integration by teachers is occasional rather than consistent, suggesting room for increased teacher engagement with technology. Results are depicted in Figure (8).

Figure 8
Teachers' Use of ICT Tools



Item 9: How effective do you think technology-based instruction is in enhancing your engagement in learning English?

Table 9

Effectiveness of TBI

Options	Number	Percentage%
Very ineffective	2	6.7%
Somewhat ineffective	4	13.3%
Neutral	6	20.0%
Somewhat effective	8	26.7%
Very effective	10	33.3%

Figure 9

Effectiveness of TBI

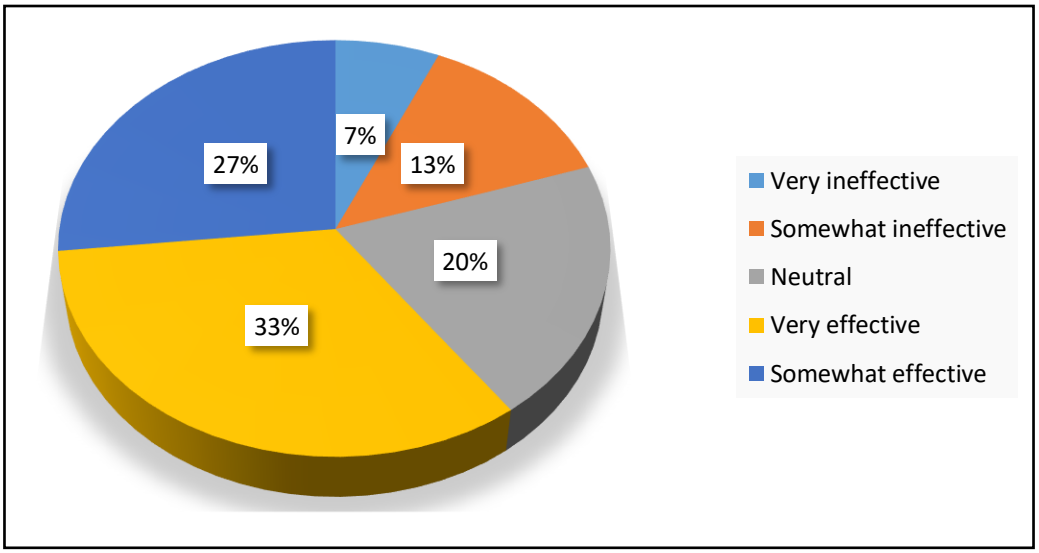


Table (9) shows that (33.3%;10 students) found TBI "very effective," (26.7%;8 students) "somewhat effective," and (20%;6 students) remained neutral. A minority found it "somewhat" (13.3%) or "very" (6.7%) ineffective. Overall, a majority of students view TBI as an effective method to enhance engagement in English learning. Figure (9) illustrates these perceptions.

Item 10: What are the main benefits of technology-based instruction in your experience? (Select all that apply)

Table 10

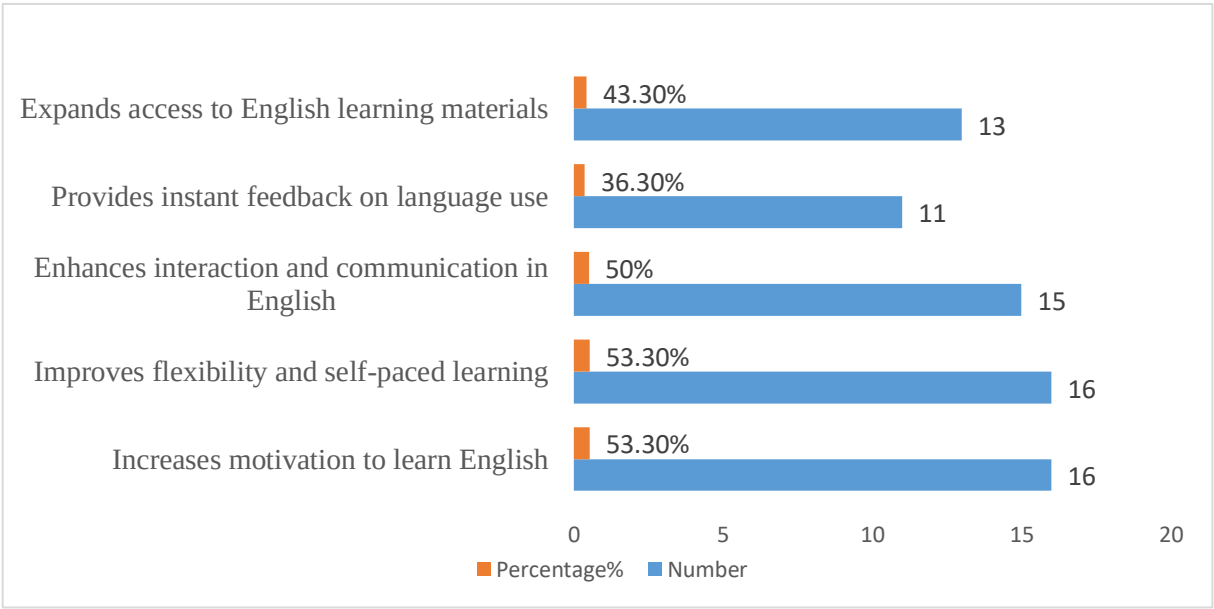
Benefits of Using TBI

Options	Number	Percentage%
Increases motivation to learn English	16	53.3%
Improves flexibility and self-paced learning	16	53.3%
Enhances interaction and communication in English	15	50.0%
Provides instant feedback on language use	11	36.7%
Expands access to English learning materials	13	43.3%

Table (10) shows (53.3%) of students believed TBI increased motivation and allowed for self-paced learning. Enhancing interaction was chosen by (50%), while (43.3%) cited expanded access to materials and (36.7%) identified instant feedback as a benefit. Overall, Students perceive TBI as a motivating, flexible, and interactive learning method. Figure (10) provides a graphical summary.

Figure 10

Benefits of Using TBI



Item 11: What challenges do you face when using technology-based instruction for learning English? (Select all that apply)

Table 11

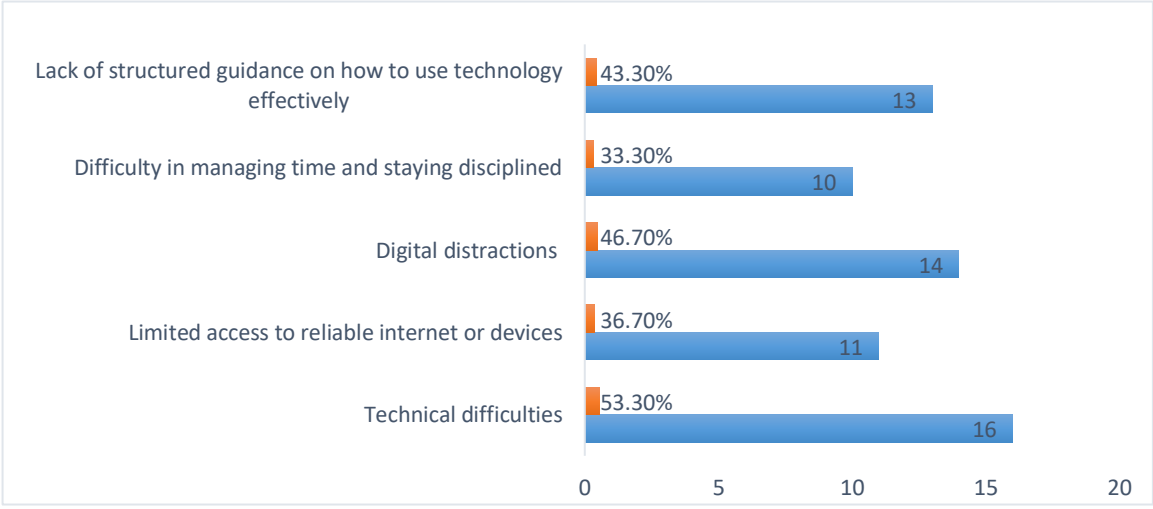
Students' Challenges in Using TBI

Options	Number	Percentage%
Technical difficulties	16	53.3%
Limited access to reliable internet or devices	11	36.7%
Digital distractions	14	46.7%
Difficulty in managing time and staying disciplined	10	33.3%
Lack of structured guidance on how to use technology effectively	13	43.3%

Table (11) shows that (53.3%) of students reported technical difficulties as a major issue. Digital distractions (46.7%) and lack of guidance (43.3%) also ranked high, followed by poor internet access (36.7%) and time management issues (33.3%). Overall, technical limitations and poor digital literacy present major barriers to the effective use of TBI. Figure (11) displays this data visually:

Figure 11

Students' Challenges in Using TBI



Item 12: How often do you use technology-based tools to plan and organize your English learning

Table 12

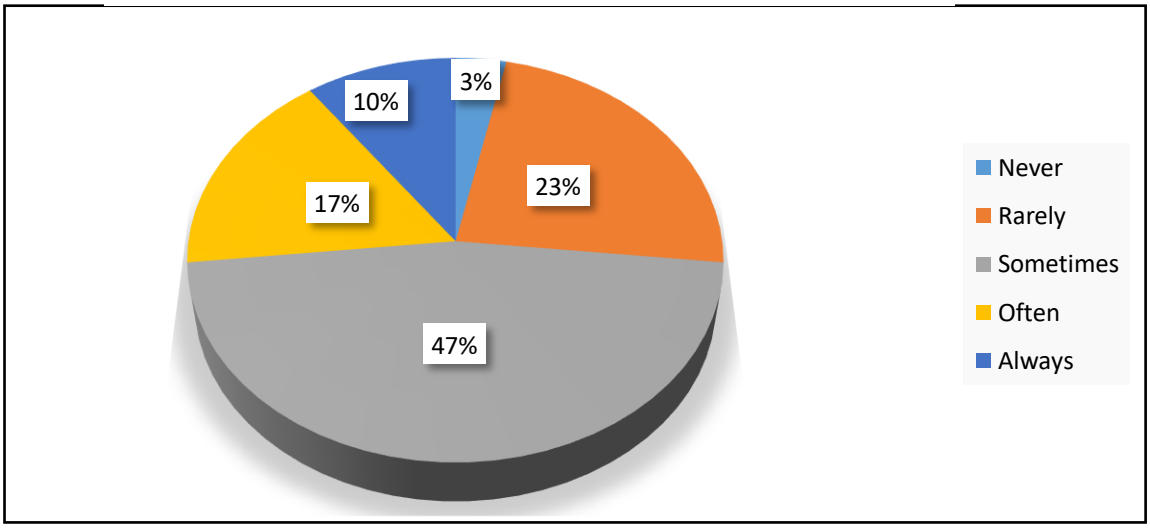
Students' Usage of Digital Tools to Manage Learning

Options	Number	Percentage%
Never	1	3.3%
Rarely	7	23.3%
Sometimes	14	46.7%
Often	5	16.7%
Always	3	10.0%

According to Table (12), many students (46.7%;14 students) use technology "sometimes" to plan their learning, (23.3%;7 students) "rarely," (16.7%;5 students) "often," (10%;3 students) "always," and only one student (3.3%) "never." This suggests that digital tools play a significant role in students' self-regulation learning, with potential for greater utilization. See Figure (12) for a visual breakdown.

Figure 12

Students' Usage of Digital Tools to Manage Learning



Item 13: **Do you think technology-based instruction helps you become more independent in managing your English learning?**

Table 13

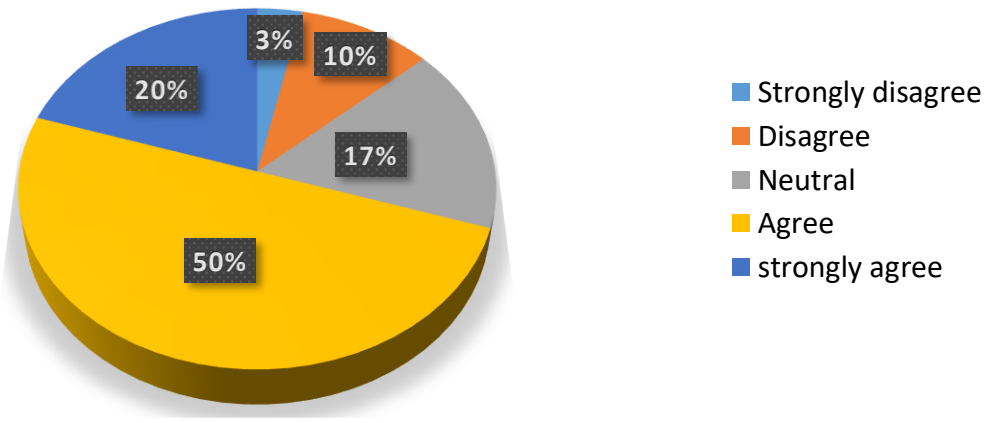
Does TBI Enhance Learner Autonomy?

Options	Number	Percentage%
Strongly disagree	1	3.3%
Disagree	3	10.0%
Neutral	5	16.7%
Agree	15	50.0%
Strongly agree	6	20.0%

Table (13) reveals that many students (50%) "agree" that TBI promotes independence in managing their English learning, (20%) of them "strongly agree," while (16.7%) are "neutral," and (10%) disagreed and one student (3.3%) strongly disagreed. Overall, A large majority believe TBI fosters autonomy in managing their English learning. This is represented above in Figure (13).

Figure 13

Does TBI Enhance Learner Autonomy?



Item 14: Which digital strategies best support your self-regulated English learning? (Select all that apply)

Table 14

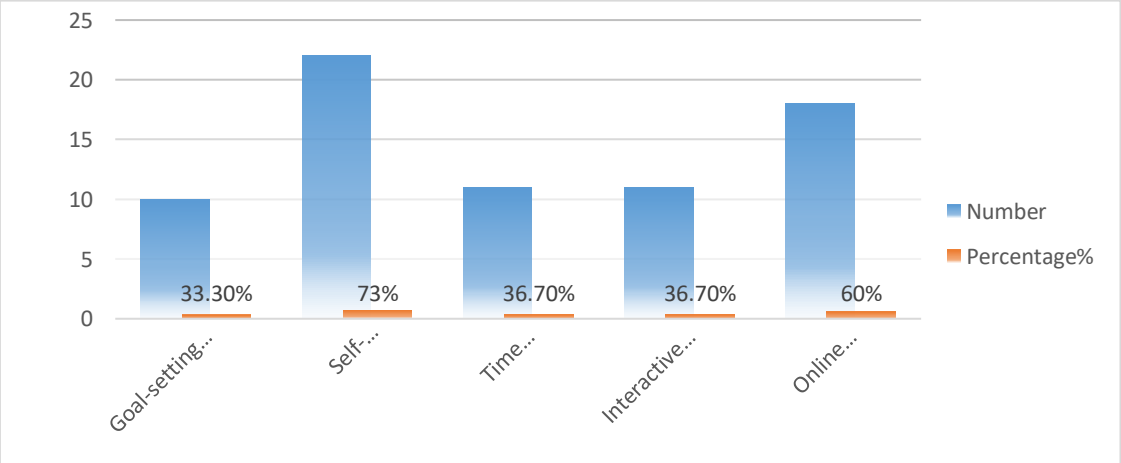
Tools that Support Self-Regulated Learning

Options	Numbers	Percentage%
Goal-setting and planning tools	10	33.3%
Self-assessment and feedback tools	22	73.3%
Time management apps	11	36.7%
Interactive and adaptive language learning platforms	11	36.7%
Online discussion forums and peer collaboration	18	60.0%

Table (14) shows self-assessment tools (73.3%) and online collaboration forums (60%) as most supportive. Time management apps and interactive platforms were selected by (36.7%) of students each, while goal-setting tools were chosen by (33.3%). Self-assessment and peer collaboration are seen as essential components of SRL. Figure 14 represents these findings:

Figure 14

Tools that Support Self-Regulated Learning



Item 15: To what extent do you believe technology-based instruction helps you reflect on your English learning and adjust your study strategies?

Table 15

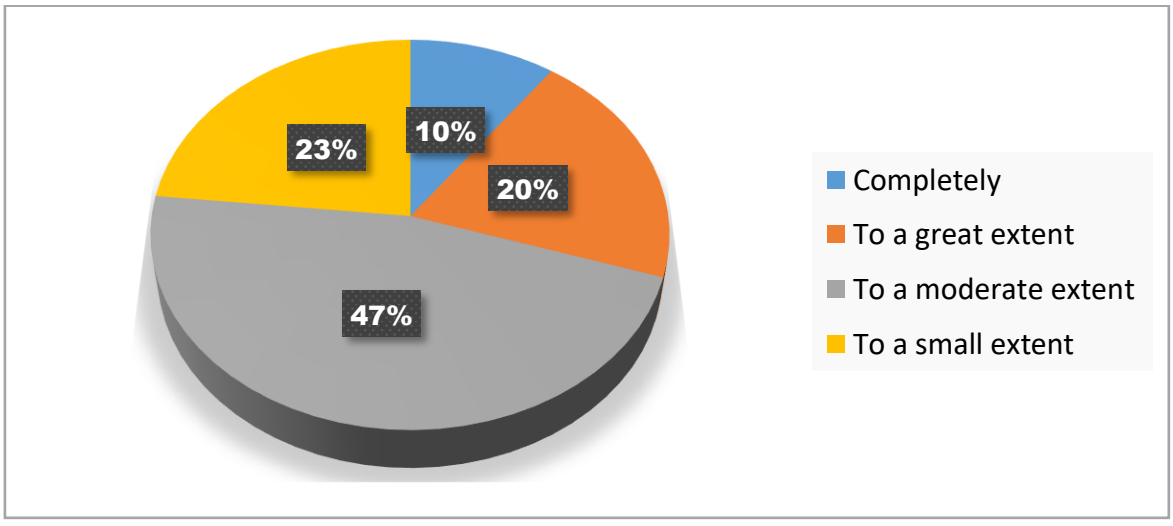
TBI and Reflection on Learning Strategies

Options	Number	Percentage%
Completely	3	10.0%
To a great extent	6	20.0%
To a moderate extent	14	46.7%
To a small extent	7	23.3%

As shown in the table above (46.7% ;14 students) felt TBI helps them reflect to a moderate extent, while (20%;6 students) said "to a great extent," (23.3%; 7 students) "to a small extent," and (10%; 3 students) said "completely.". Overall, the majority of students recognize technology's role in supporting reflective learning and adjustment of strategies. Figure (15) provides the visual depiction:

Figure 15

TBI and Reflection on Learning Strategies



2.3. Teachers' Interview

2.3.1. Aim of Teachers' Semi-Structured Interview

The aim of the semi-structured interview with teachers was to gain more insight into their perceptions, experiences, and attitudes towards the use of technology-based instruction in improving EFL learners' self-regulation. This qualitative data collection method allows for a deeper understanding of how teachers integrate technological tools in their teaching practices, the challenges they face, and their perceptions on the benefits of such methods in fostering students' autonomy and self-regulated behaviors. In addition, the interview was designed to investigate teachers' suggestions and recommendations for improving technology use in EFL classrooms.

2.3.2. Description of Teachers' Semi-Structured Interview

The semi-structured interview with EFL teachers at Biskra University served as a key qualitative instrument in gathering in-depth data on learners' attitudes and experiences with technology-based instruction as well as their impact on students' self-regulation. The interview was deliberately designed to meet the research's objective, and it contained four main sections: general information, perceptions on technology-based instruction, the relationship between technology and learner self-regulation, and recommendations for improvement.

The first section contained background information on the participants professional experience and their general views of technology integration in EFL contexts. The second section looked at the types of technological tools used, as well as perceived effects on students' engagement and motivation. The third section delved into how technology enhances self-regulated learning, including goal-setting, time management, and learners' autonomy. Teachers were encouraged to share ideas and evaluate institutional support

related to the use of technology in the final section. Therefore, by conducting this interview, the research questions can be answered in a credible manner.

2.3.3. Piloting and Validation of Teacher's Semi-Structured Interview

A pilot test was conducted with two EFL teachers who were not included in the main study to evaluate the interview guide's clarity, logical flow, and appropriateness. The feedback obtained from this trial led to minor adjustments aimed at enhancing the phrasing of questions. To ensure the protocol's validity and alignment with the research objectives, it was also assessed by academic supervisors and subject matter experts. This thorough process enhanced the tool's reliability and credibility.

2.3.4. Administration of Teacher's Semi-Structured Interview

The semi-structured interview with teachers was carefully planned to gather relevant and meaningful data in alignment with the study's objectives. Before the interview took place, each participant was approached individually, provided with detailed information regarding the nature, purpose, and ethical considerations of the research. After obtaining informed consent, appointments were arranged according to the participants' availability. All interviews were conducted face-to-face on the grounds of Biskra University in the Department of Language and English Literature. to promote direct interaction and clear communication. Although the initial plan was to interview ten (10) teachers, only nine (09) were ultimately available and agreed to participate in the study. The interviews were conducted over a period of approximately two weeks, from 27th March to 13th April 2025.

Each interview lasted around 15 to 20 minutes and adhered to a semi-structured format, allowing the researcher to ask a predetermined set of open-ended questions while also having the flexibility to make follow-up inquiries and seek clarifications. The interview guide was divided into four thematic sections: general information, perceptions

of technology-based instruction, the relationship between technology and learners' self-regulation, and recommendations for future improvements.

To ensure the accuracy and reliability of the collected data, the interview was audio-recorded with the participants' explicit consent and later transcribed for analysis. Anonymity and confidentiality were rigorously upheld throughout the process to protect the identities of the participants and assure ethical compliance. The information gathered from the interviews provided valuable qualitative insights that enhanced the understanding of teachers' views on technology-based instruction within the EFL context.

2.3.5. Data Analysis and Interpretation

The analysis of the teachers' interview provided the following insights:

Section 1: General Information

Question One: Can you introduce yourself and briefly describe your experience in teaching EFL at the university level?

Teacher 1: My teaching experience has been fine in general with some positive and negative points.

Teacher 2: Assistant Professor: 9 years of experience.

Teacher 3: I am a university lecturer specialized in English literature. My humble experience expands to instructing linguistics and phonetics which contributed to enlarge my interaction with English language in the academic sense. This extension provided me with new skills and competencies in teaching EFL within different culture context.

Teacher 4: I am Dr. A I have been teaching for 5 years at university.

Teacher 5: I am B, associate professor, specializing in TEFL, I have been teaching at university since 2015.

Teacher 6: I am C, PhD in Applied linguistics. I have been teaching EFL to tertiary students for almost 18 years. In this period, I have taught different courses including both skill-based courses (speaking and writing, reading) and content-based courses (Psychology, ESP, Didactics).

Teacher 7: I am D, a university teacher since 2013; PhD degree.

Teacher 8: MAA. I have a magister degree. I have been teaching 13 years at university.

Teacher 9: I am E, and I am specialized in applied linguistics. I have been teaching for more than 15 years for the Department of English Language in this university.

The objective of this question was to examine the educational and professional experiences of the nine teachers involved in the study, specifically focusing on their qualifications, teaching backgrounds, and areas of expertise within English as a Foreign Language (hereafter EFL). The findings reveal that all participants possess the necessary qualifications to provide valuable insights into technology-based instruction and its impact on learners' self-regulation.

Teacher 1 offered a general assessment of their teaching background, characterizing it as predominantly positive but with some challenges, indicating a thoughtful and balanced perspective. Teacher 2, an Assistant Professor with nine years (09) of experience, contributes a robust academic and professional foundation in EFL teaching. Teacher 3, a lecturer in English literature who also teaches linguistics and phonetics, brings an interdisciplinary approach by addressing both content and skill-based learning. Teacher 4, despite having only five years (05) of experience, holds a doctoral degree, showcasing strong academic credentials and an understanding of contemporary teaching methods.

Teacher 5, an Associate Professor focused on TEFL and teaching since 2015, aligns closely with the primary objectives of this research. Teacher 6, who has a PhD in Applied Linguistics and nearly 18 years of experience, has taught both skill-based courses (such as speaking and writing) and content-oriented classes (like ESP and Didactics), offering a comprehensive and nuanced perspective. Teacher 7, teaching since 2013 and holding a PhD, indicates a solid academic background alongside practical experience in higher education. Teacher 8, with a Magister degree and 13 years of teaching experience, provides a long-term perspective on EFL instruction and the evolving use of digital tools. Finally, Teacher 9, possessing over 15 years of experience and a specialization in Applied Linguistics, is likely to deliver informed insights regarding learner autonomy and self-regulated learning.

In a nutshell, this group comprises highly qualified and experienced university EFL teachers, with teaching careers ranging from five to eighteen years. Their diverse yet complementary profiles—including TEFL, Applied Linguistics, Literature, and ESP—demonstrate a well-rounded understanding of language education. This variety strengthens the reliability and depth of the data, as each teacher offers a distinct viewpoint on the challenges and advantages of integrating technology in the EFL classroom. Their backgrounds indicate that they are well-equipped to discuss how digital tools affect learners' motivation, independence, and self-regulation—key areas of focus for this research.

Question Two: What are your thoughts on the integration of technology in EFL instruction at Biskra University?

Teacher 1: The integration of technology is important yet there should be some restrictions on how to integrate it. It has to be complementary to traditional methods of instruction.

Teacher 2: I found it so necessary.

Teacher 3: I highly support such integration because it has been proven that tech significantly affects the students perceived support.

Teacher 4: It sounds great. Students and teachers alike can break the routine of daily classes and it is an enjoyable experience.

Teacher 5: It enhances learning but needs better infrastructure and training.

Teacher 6: I believe that integrating technology in EFL classes becomes a must due to the immense importance and advantages it provides to learners.

Teacher 7: It is very important and necessary.

Teacher 8: I believe it is a very good idea as technology became used everywhere and by all people around the world especially in education.

Teacher 9: Well, in our Department of Language and English Literature, I think that the answer is very obvious, since now we live in the age of technology, so it's a must. We are compelled; we are obliged to integrate technology-based instruction because technology now is part of our life.

This question aim was to explore teachers' overall attitudes toward the integration of technology into EFL instruction. The feedback collected indicates a firmly positive agreement among teachers, with most supporting the use of technology in their classrooms; however, some conveyed conditional perspectives regarding its application.

Many teachers underscored the importance of integrating technology in EFL environments. Teacher 2 concisely remarked that it is “so necessary,” while Teacher 7 described it as “very important and necessary.” In a similar vein, Teacher 6 argued that integrating technology has become a “must” owing to its numerous advantages, and

Teacher 9 highlighted that in the current digital age, teachers are "obliged" to incorporate technology, as it is now part of daily life.

Other teachers acknowledged both the advantages and conditions associated with technology use. Teacher 1 advocated for integration but emphasized that it should complement traditional methods and be used wisely. Teacher 5 also recognized its benefits but pointed out the necessity for improved infrastructure and teacher training. These insights reflect a more balanced perspective, recognizing both the possibilities and practical challenges of technology use.

Teachers also identified engagement and motivation as significant advantages of incorporating technology. Teacher 3 noted that technology "significantly affects the students' perceived support," highlighting its role in enriching the learning environment. Teacher 4 viewed it as a means to "break the routine of daily classes," finding it to be an enjoyable experience for both teachers and learners. Teacher 8 concurred, citing technology as widely utilized and particularly valuable in educational settings.

In summary, a majority of teachers showed strong support for the integration of technology in EFL instruction, perceiving it as essential and advantageous. Though some cited obstacles like infrastructure issues and the need for moderation, all acknowledged its importance and potential for enhancing teaching and learning. These findings suggest that teachers are aware of the evolving demands of education and recognize the crucial role technology plays in creating effective and engaging EFL classrooms.

Section 2: Perceptions on Technology-Based Instruction

Question Three: What types of technology-based tools or platforms do you use in your teaching?

Teacher 1: I use some platforms to assign some lectures and homework to learners.

Teacher 2: Only videos, and once I used Google Classroom during the pandemic phase.

Teacher 3: Entertainment e-learning platforms could be sufficient enough for our students to auto-learn and entertain at the same time.

Teacher 4: Data show, speakers, YouTube Channels, Moodle...

Teacher 5: I use Moodle, Google Classroom, Zoom, and educational apps.

Teacher 6: Tools (PC, data show, mobile), media (internet websites, emails), platforms (Moodle), social media (Facebook) AI-powered tools (ChatGPT, DeepSeek).

Teacher 7: I use laptops.

Teacher 8: I use learning management systems like "Moodle" and "Progres" to organize course content, manage assignments, and insert grades. I can use "Zoom", or "Google Meet" for virtual classrooms.

Teacher 9: We use the very known popular platform at the university level which is the Moodle platform. I think this is the one that we used in instruction.

This question sought to pinpoint the specific digital tools and platforms employed by teachers in their EFL instruction. The feedback gathered indicates a diverse range of technology utilization, ranging from basic hardware and online resources to advanced platforms and AI-powered tools. Overall, the data suggest that the majority of teachers are acquainted with and actively engage various forms of educational technology, although the degree and purpose of their usage differ.

A frequently mentioned platform among several teachers is Moodle, the official learning management system of the university. Teachers 4, 5, 6, 8, and 9 all indicated their use of Moodle for tasks such as uploading materials, organizing content, and delivering

instruction. Teacher 9 emphasized that Moodle serves as the primary platform for university-level education, highlighting institutional dependence on this tool.

In addition to Moodle, other platforms, including Google Classroom, were referenced by Teachers 2, 5, and 8. Teacher 2 noted their use of Google Classroom during the pandemic, indicating a transition to remote learning at that time. Likewise, Teacher 8 mentioned employing "Progres" alongside Moodle for managing grades and assignments.

Teachers also reported the use of communication and video conferencing tools such as Zoom and Google Meet (Teachers 5 and 8), particularly for virtual classes. These tools facilitate synchronous learning and proved especially valuable during periods of remote education. A few teachers referred to media-based and content resources, such as YouTube channels, various websites, and email (Teachers 4 and 6), utilized to enhance lessons with audiovisual materials and online resources.

Significantly, Teacher 6 provided a detailed overview, categorizing their tools into hardware (PC, mobile devices, data projectors), media sources (websites, emails), platforms (Moodle), social media (Facebook), and even AI-powered tools like ChatGPT and DeepSeek. This suggests a more advanced and integrated approach to technology in EFL instruction.

Conversely, some teachers reported more limited tool usage. Teacher 1 mentioned using platforms for distributing lectures and homework, while Teacher 7 only referenced the use of laptops without specifying particular software or platforms. Teacher 3 approached the topic differently, highlighting entertainment-centered e-learning platforms that foster autonomous and enjoyable learning, revealing a pedagogical emphasis on student motivation and engagement.

In conclusion, the responses indicate that most teachers are incorporating a variety of digital tools and platforms into their EFL teaching practices. Moodle stands out as the most commonly used platform, complemented by systems like Google Classroom, Zoom, and Progres. While some teachers are experimenting with more innovative tools, including AI and entertainment-based platforms, others limit their usage to basic devices or media. This diversity of technology integration demonstrates both individual teaching methodologies and the resources available within institutions, showcasing teachers' efforts to adapt to modern educational demands and enhance students' learning through digital means.

Question Four: How do you think technology impacts students' engagement and motivation in learning English?

Teacher 1: Technology may support learners' autonomy and encourage their involvement in the learning process.

Teacher 2: Many do not know technical terminology and different AI tools for example except for ChatGPT.

Teacher 3: Technology significantly impacts the students' engagement and motivation

Teacher 4: Actually, students are into using such technologies since they provide positive atmosphere for students to build up new knowledge. Students are highly motivated and fully engaged.

Teacher 5: It boosts engagement and motivation through interactivity and variety.

Teacher 6: It stimulates them to participate effectively in the classroom. It also motivates to stay focused and make good sense of their learning.

Teacher 7: it is motivating and it facilitate the teaching learning processes.

Teacher 8: Technology has a huge impact on students' engagement and motivation in learning English, primarily by offering dynamic, interactive, and personalized learning experiences. students used technology all the time and everywhere, so they find it a must and consider it enjoyable and motivating. Technology is attractive as it offers a wide range of games and fun quizzes like with "Kahoot" or "Duolingo" apps. Thus, students are more likely to stay motivated when they can see their progress in real-time and earn rewards for completing tasks or leveling up. some tools like "Duolingo" are based on adaptive learning which is a good approach that boosts motivation because it ensures that the material is neither too difficult nor too easy for the learners. With platforms like "Grammarly", students can receive instant feedback (corrections) on grammar, spelling, and usage. This immediate feedback loop helps learners understand their mistakes and correct them on the spot, which accelerates their learning. Technology helps also give the opportunity for students to learn at their own pace. This flexibility allows for a more self-directed approach, which can be highly motivating for students who have busy schedules or prefer to learn independently.

Teacher 9: I think one of the merits of technology if we see it from a very positive side. It has been argued and claimed by many researchers, scholars, university teachers that the use and the integration of technology has advanced what we call in instruction personalized learning. I think this is one of the benefits it has led to some extent to enable learners to become more autonomous and self-independent rather than to be dependent on teacher. This is very common, especially in traditional modes of teaching which is the face-to-face teaching and learning and where the teacher is the source of knowledge. Now because of technology, the knowledge is not within the teacher, knowledge is everywhere and it's up to the students to look for this knowledge.

The aim of this question was to investigate teachers' perceptions on how technology influence learners' engagement and motivation in the EFL classroom. The responses revealed a widespread agreement that technology has a positive effect on students' engagement, motivation, and autonomy, although a few teachers also pointed to specific difficulties in learners' digital literacy.

Technology supports learner autonomy and fosters greater involvement in the learning process, according to teacher 1. In the same way, Teacher 3 stated that technology greatly enhances students' engagement and motivation. Students are highly motivated and engaged when using technology, Teacher 4 emphasized that technology fosters a positive learning environment that fosters knowledge construction. Teacher 5 echoed this view, saying that the interactive nature and variety of technology tools help with boosting motivation and engagement.

Teacher 6 observed that technology stimulates student participation and helps them stay focused, contributing positively to their understanding of lessons. Likewise, Teacher 7 mentioned that it is motivating and facilitates the overall teaching and learning process. Teacher 8 offered a comprehensive response, emphasizing that technology offers dynamic, interactive, and personalized learning experiences. They explained how apps like Kahoot and Duolingo, with features like adaptive learning and gamification, keep learners motivated by allowing them to track their progress, receive instant feedback, and work at their own pace. They also noted that this flexibility supports self-directed learning, which is especially beneficial for students with different learning preferences.

Teacher 9 took a more philosophical and pedagogical approach, arguing that technology can aid personalized and autonomous learning by moving the source of knowledge from the teacher to the modern digital world. Learners will move away from dependency on the

teacher to independent knowledge exploration, a significant departure from traditional teacher-centered approaches.

Although the majority of responses were positive, Teacher 2 identified a drawback: Many students are still unfamiliar with key technical terms or advanced applications, except for commonly used ones such as ChatGPT. This points to a potential digital literacy gap that could prevent full engagement for certain learners.

Overall, teachers agree that technology enhances students' motivation and engagement in EFL instruction by making it more accessible, adaptable, and learner-centered. Several discussed the role of technology in supporting autonomy, personalization, and real-time feedback, all of which contribute to a more meaningful learning experience. However, a few responses revealed that not all learners are fully prepared to use technology effectively, indicating the need for more guidance or digital skills training. These results support the argument that when technology is used properly, it will greatly foster the EFL classroom and promote self-regulated learning.

Question Five: In your experience, what are the main advantages of technology-based instruction for EFL students?

Teacher 1: Easy access to information and diversity of illustration methods.

Teacher 2: It helped students specially the majority of them do not like reading.

Teacher 3: It enhances the students 4 learning skills, helps students to access the world of technology and easily integrate with knowledge, it encourages their self-learning, and it also enhances their motivation an engagement.

Teacher 4: It breaks the routine. Students can stay engaged, create positive atmosphere to learn. It fits different types of learners (visional, auditory, ...), it facilitates their presentations, it also works as a pedagogical aid.

Teacher 5: Flexibility, access to resources, and personalized learning.

Teacher 6: It offers a wide range of sources and materials to learn in audiovisual environment. It also exposes learners to the authentic language and culture. It helps them also to improve their skills.

Teacher 7: Faster, motivating, facilitating, and it develops learners' autonomy.

Teacher 8: It is more engaging and fun, it deals with individual needs, it provides access to real world language and cultures, it encourages communication and collaboration, it saves time and energy for the teacher, and enhances students' autonomy.

Teacher 9: One of the advantages is personalized learning. Second, it's also about the learners' autonomy, it makes this type of teaching and learning that means the integration of technology instruction helps learners to be autonomous. Also, there is another factor which has been coming within this type of instruction; it is that these learners are not more motivated rather than the previous time or because they want usually to learn by themselves. So, motivation is usually increasing in this type of instruction so we can say personalized Learning, motivation. Also, the development of critical thinking since learners are self-independent and that they have to look for the information rather than to be assisted or helped by others to get this information.

Question five aimed to uncover teachers' perspectives on the main advantages of using technology in EFL instruction. The responses reflect revealed a common belief in the significant pedagogical value of technology, particularly in increasing learners' motivation, fostering autonomy, offering flexibility, and enhancing access to diverse resources.

Several teachers emphasized the role of technology in improving students' engagement and motivation. Teachers stated that it makes learning more enjoyable (Teachers 3, 4, 8), breaks the monotony of traditional lessons (Teacher 4), and supports more dynamic and interactive learning experiences (Teachers 5 and 8). Technology was also recognized for encouraging students to participate more actively and take greater responsibility for their learning.

Learners' autonomy emerged as a strong theme. Many teachers (Teachers 3, 7, 8, and 9) noted that technology helps students become more self-directed and independent, allowing them to manage their learning at their own pace. Teacher 9 linked this independence to the development of critical thinking, as students are now expected to seek out knowledge on their own rather than rely solely on the teacher.

The advantage of personalized learning was also widely mentioned. Teachers 5, 8, and 9 pointed out that digital tools enable instruction to be adapted to individual learners' needs and preferences, which enhances the effectiveness of the learning experience.

In addition, teachers highlighted easy access to resources and authentic materials. Teacher 1 mentioned the diversity of illustration methods, while Teachers 6 and 8 emphasized that technology allows learners to engage with real-world language and cultural content, improving language competence in meaningful ways. Teacher 6 also noted that technology creates a rich audiovisual environment that supports skill development.

Some teachers also recognized benefits for the teacher. Teacher 8, for example, mentioned that technology helps save time and energy in lesson delivery and management.

Overall, the teachers agreed that technology-based instruction offers multiple advantages for both students and teachers. It increases motivation, fosters autonomy,

personalizes learning, supports different learning styles, and provides access to authentic and diverse materials. These benefits contribute directly to more effective and engaging EFL instruction and align closely with the goals of promoting learners' independence and self-regulation.

Question Six: What challenges do you face when implementing technology in your teaching?

Teacher 1: The classroom setting and the availability of technology materials.

Teacher 2: An often Illiteracy and that is what I remarked when I used Google Classroom or Moodle platform of university

Teacher 3: Algerian universities in general still lack the material equipments of technology. Teachers as well as students still need deeper training to know how to use technology.

Teacher 4: Lack of equipment (plugging, data show...). Teachers should be aware of how to use these technologies and preparing ahead.

Teacher 5: Poor internet, limited devices, and lack of teacher training.

Teacher 6: Technical issues (poor internet services), inadequate classroom climate (noise, lightning, equipments), students' unfamiliarity with some technical issues. Difficulty to select the appropriate materials that suits learners' level, interests and culture.

Teacher 7: The large number of students and the lack of materials like projectors.

Teacher 8: Not all students have digital devices, No available high-speed internet or no access at all in class. This includes also internet problems, software crashes, or hardware malfunctions which can disrupt the flow of a lesson. It needs to be skillful at using digital devices which cannot be the case for some teachers or students. Over-reliance on

technology and less reliance on students' creativity. it becomes usual to see students copy whole essays or answers of tasks, or work together when they shouldn't, which can affect the reliability of assessments. sing technology for online classes may reduce meaningful face-to-face communication in class.

Teacher 9: First, the main challenge of the integration of technology instruction is due to the instructional environment, perhaps one of the biggest problems that we are facing especially in our context in the Department of Language and English Literature is the overcrowded classrooms which means, in other words, the number of students that we teach. This sometimes hampers the use and integration of technology because sometimes technology requires a small number of learners. Second, regarding to the logistics, the availability of the net, the availability of platforms, the availability of. technological tools sometimes because of this lack, so the integration of technology is not realized as it as it is expected by the people who want to be integrated in this structure.

This question sought to explore the main challenges that teachers face when integrating technology into EFL instruction. The responses revealed a range of difficulties related to infrastructure, digital literacy, classroom conditions, and pedagogical concerns, particularly within the context of the Department of Language and English Literature.

A common issue highlighted by several teachers was the lack of technological equipment and poor infrastructure. Teachers pointed to the limited availability of essential tools such as projectors, data shows, and appropriate classroom facilities. Inadequate lighting, overcrowded classrooms, and outdated settings were frequently mentioned as obstacles that hinder the effective use of technology (Teachers 1, 3, 4, 5, 6, 7, and 9). Teacher 9 specifically emphasized that the large number of students often makes it difficult to apply technology-based methods, which typically work better in smaller, more manageable class sizes.

Another major challenge is weak internet connectivity and limited student access to digital devices. Teachers noted that slow or unreliable internet, as well as the absence of personal devices, can disrupt lessons and prevent smooth integration of digital tools (Teachers 5, 6, and 8). Technical issues such as system crashes and software malfunctions were also mentioned as common setbacks during class sessions.

The need for digital training and skill development was a concern raised by several teachers. Teachers 3, 4, 5, and 8 stated that both students and instructors often lack the necessary skills to navigate platforms like Moodle or Google Classroom. Teacher 2 also observed that many students are not familiar with digital or technical terms, which limits their ability to benefit from online learning platforms.

In addition to technical and training issues, some teachers expressed concerns about the pedagogical impact of technology. Teacher 8 noted that over-reliance on technology may reduce creativity and encourage academic dishonesty, such as students copying work or relying too heavily on automated tools. They also pointed out that online teaching might limit meaningful classroom interaction and reduce opportunities for face-to-face communication.

Teacher 6 also highlighted the difficulty of selecting appropriate digital materials that match students' language proficiency, interests, and cultural backgrounds. This reflects a broader challenge of aligning digital content with pedagogical goals and learner needs.

Overall, the responses show that while teachers recognize the potential of technology in EFL instruction, its implementation is often limited by practical challenges. These include poor infrastructure, technical issues, limited digital skills, large class sizes, and concerns over the educational effects of excessive technology use. Addressing these

barriers requires stronger institutional support, improved internet access, teacher training, and careful planning to ensure that technology enhances rather than hinders the learning experience.

Section 3: Technology and Learner Self-Regulation

Question Seven: Based on your observations, how does technology help students regulate their own learning (e.g., setting goals, managing time, monitoring progress)?

Teacher 1: If students make good use of technology, they will be able to track their language development and intensify their linguistic outputs.

Teacher 2: They use my videos to avoid reading for example short stories or novels, which is negative side effect.

Teacher 3: Yes, it helps to enhance other skills like time management

Teacher 4: Technologies facilitate the process of presenting new things. Sts would set their goals and can manage their time correctly

Teacher 5: It helps with goal setting, time management, and self-monitoring via apps and platforms.

Teacher 6: I can't tell. This might be best asked to students.

Teacher 7: they become more organized and more willing to present interesting new things professionally.

Teacher 8: it makes students set their own goals, it is also based on consistent practice and time management. Students have an illimited access to resources like online dictionaries, Grammar checkers, translation tools which make independent and engaged learners. Many learning platforms give students instant feedback and show their progress (if they mastered

vocabulary, improved their skills, ...) Seeing tangible progress builds confidence and helps students know where to focus next, and it promotes their autonomy and self-independence.

Teacher 9: Based on my observation, personalized learning requires learners to manage their time, they have to be prepared; they have to schedule their tasks. So, I think the type of learning that is advanced by technology-based instruction requires that learners have to depend on themselves, organize themselves, regulate themselves, and not to be dependent on others so they have to do everything by themselves.

This question explored how technology influences students' ability to manage and regulate their own learning, based on teachers' observations. Most participants agreed that technological tools can support aspects of self-regulation, such as setting learning goals, managing time, monitoring progress, and fostering independence, although a few expressed concerns or uncertainty.

Several teachers observed that technology encourages learners to become more responsible for their academic progress. Teachers noted that students are better able to organize their schedules, plan tasks, and track performance using digital tools and platforms (Teachers 3, 4, 5, and 8). These tools, they explained, make it easier for students to engage in structured and intentional learning. Teacher 8 further emphasized that the availability of online resources—such as dictionaries, grammar checkers, and translation apps—supports independent study and increases learners' engagement.

Instant feedback and visible progress tracking were seen as motivating factors. Teacher 8 pointed out that such features help students build confidence and understand where to focus their efforts. Likewise, Teacher 1 commented that students who use technology effectively can evaluate their development and improve their language production over time.

Some teachers also noticed growth in students' organizational skills and self-reliance. Teacher 7 mentioned that learners become more orderly and professional in their work, while Teacher 9 linked technology-based learning to a shift toward student-centered learning, where learners take charge of their own academic responsibilities without relying entirely on the teacher.

On the other hand, a few teachers expressed reservations. Teacher 2 noted a negative trend where students rely on video content to replace reading, which may weaken their academic performance. Teacher 6 felt that such impacts are better evaluated by the students themselves, suggesting limited direct observation of these effects.

In summary, most teachers acknowledged the positive impact of technology on learners' ability to manage and direct their learning. Technology appears to support key self-regulatory behaviors such as planning, practicing, evaluating, and learning independently. However, some concerns were raised about misuse and the difficulty in measuring its effectiveness purely through teacher observation. Still, the overall findings suggest that, when used thoughtfully, technology can be a valuable tool in developing self-regulated learners in the EFL classroom.

Question Eight: Do you think technology-based instruction encourages students to become more independent learners? Why or why not?

Teacher 1: It depends on how they use technology. some students complement their knowledge using useful technological tools while others rely parasitically on what technology produces to them.

Teacher 2: It makes them lazy, but at the same time dependent on the use of such material, because it is ready and do not involve the learner.

Teacher 3: Yes.

Teacher 4: Yes, due to the fact that they need to rely on themselves to prepare and present

Teacher 5: Yes, it encourages independence through access to self-paced materials.

Teacher 6: To some extent, yes. Students, with the help of technology, can learn on their own pace and make learning more autonomous. Now, the internet offers multiple options for them to learn independently according to their preferences and interests.

Teacher 7: Yes, if the tools are used wisely and properly.

Teacher 8: Yes, it does because students can learn outside of school hours using apps, websites, or recorded lessons without the help of the teacher. they can explore topics at their own pace and revisit material as needed. technology encourages searching for resources, checking sources, comparing tools, and making learning decisions. All this develop critical learning skills. Students can access to dictionaries, video lessons, ...as well as AI tools like ChatGPT which can help answer language questions, explain grammar, or give writing feedback. therefore, they need less teacher's help and feedback.

Teacher 9: Yes, it is one of the merits of the integration of technology-based instruction. It is that students will be more independent because they have to rely on themselves in everything, not to rely on others.

The purpose of this question was to explore how technology influences students' ability to manage and regulate their own learning, based on teachers' observations. The majority of participants (7 out of 9 teachers) believed that technology supports various aspects of self-regulation, including goal setting, time management, progress monitoring, and independent learning. One teacher offered a conditional response, indicating that the effect of technology depends on how it is used. Another teacher expressed doubt about the observable impact of technology on students' self-regulatory behavior.

Several teachers observed that digital tools promote student responsibility and autonomy. Teachers noted that technology helps students organize their tasks, manage their time, and track their learning progress more effectively (Teachers 3, 4, 5, and 8). Teacher 8, in particular, emphasized that the wide availability of online resources—such as grammar checkers, dictionaries, and translation tools—encourages independent learning and engagement. They also noted that students benefit from instant feedback and visible progress tracking, which builds confidence and guides learners toward areas needing improvement.

Teacher 1 shared a similar view, explaining that when students use technology properly, they are better able to assess their development and improve their linguistic output. Teacher 7 noted that learners tend to become more organized and present ideas more professionally with the support of technology. Teacher 9 further linked technology-based instruction to student-centered learning, suggesting that digital tools shift the responsibility from the teacher to the learner, promoting autonomy and self-management.

On the other hand, a few concerns were raised. Teacher 2 observed that some students misuse technology—for instance, watching video summaries instead of reading assigned texts—which may reduce meaningful learning. Teacher 6 was uncertain about the impact and suggested that students themselves are in a better position to evaluate how technology affects their learning behaviors.

In conclusion, a significant majority of teachers agreed that technology plays a positive role in supporting learner self-regulation, especially in helping students set goals, manage time, track progress, and work independently. While a small number of teachers expressed concerns about misuse or lacked direct observations, the overall findings indicate that technology, when used effectively, can serve as a powerful tool in promoting self-regulated learning among EFL students.

Question Nine: What digital tools or strategies do you recommend for fostering self-regulation among EFL students?

Teacher 1: Language apps are useful for fostering learners' self-regulation.

Teacher 2: Limit it, direct it, engage students.

Teacher 3: Applications such as Duolingo can foster learners' self-regulation.

Teacher 4: Use apps like Duolingo, YouTube, podcasts….

Teacher 5: Apps like Google Keep, Trello, Quizlet, and self-assessment tools.

Teacher 6: The internet offers a wide range of tools. I see that YouTube channels might be helpful to students who are willing to learn independently.

Teacher 7: Tablets, mobiles, laptops, projectors…

Teacher 8: "ChatGPT, deep seek, Gemini", ... Students can have practice conversations, ask grammar questions, or generate writing prompts, get any kind of information for their research papers... "Grammarly" to check grammar and improve their writing mainly, "HelloTalk", ...to practice speaking or writing with native speakers or other learners. "YouTube" to encourage students to follow English learning channels and build a playlist of favorite listening materials. "Duolingo", to improve skills especially grammar. "Kahoot" to practice with fun and interact with other learners.

Teacher 9: I think the easiest and the very valuable tool is to use mobiles, what we call mobile learning 'Mobile-Based Learning' That means learning through mobiles, this can help them because all students now are equipped with the smart phones and mobiles so they can use this in their learning.

This question aimed to identify the digital tools and strategies that teachers recommend for promoting self-regulated learning among EFL students. The responses revealed a wide range of suggestions, including specific applications, digital resources, and broader instructional strategies—all intended to encourage autonomy, engagement, and effective learning management.

Several teachers recommended language learning applications such as Duolingo, which were viewed as effective in helping students practice language skills independently in an engaging and structured way (Teachers 1, 3, and 4). Teacher 4 also highlighted YouTube and podcasts as valuable tools for independent listening practice and vocabulary development.

Productivity and self-monitoring tools were also emphasized. Teacher 5 suggested apps like Google Keep, Trello, and Quizlet, which support learners in setting goals, organizing study schedules, and reviewing content. These tools were seen as beneficial for fostering time management and personal responsibility.

Teacher 6 pointed out that platforms like YouTube provide accessible learning content and support students who prefer independent study. Similarly, Teacher 8 offered a comprehensive list of AI-driven and interactive tools, including ChatGPT, DeepSeek, Gemini, Grammarly, Kahoot, and HelloTalk. These tools provide opportunities for writing assistance, grammar correction, real-time language practice, and personalized feedback, all of which help learners take greater control of their learning.

Teacher 9 advocated for mobile-based learning, emphasizing that smartphones, which most students already own, offer convenient access to educational content. This supports flexible, self-paced learning and encourages students to engage with English beyond the classroom.

On a strategic level, Teacher 2 emphasized the importance of guiding and managing students' use of technology—highlighting the need to limit distractions, provide direction, and actively involve learners in their own progress. Meanwhile, Teacher 7 focused on the hardware aspect, mentioning devices such as tablets, laptops, and projectors as essential tools for delivering and accessing digital content.

In summary, teachers recommended a diverse range of digital tools and strategies that contribute to learner self-regulation. These include language apps, organization tools, AI platforms, communication-based tools, and mobile learning solutions. While tools like Duolingo, YouTube, ChatGPT, and Grammarly were among the most commonly cited, the importance of teacher guidance and intentional use was also stressed. Collectively, the responses suggest that when integrated purposefully, digital tools can effectively support students in managing their own learning and becoming more autonomous in the EFL classroom.

Section 4: Recommendations and Future Perceptions

Question Ten: What improvements or changes would you suggest to enhance the effectiveness of technology in developing students' self-regulated learning skills?

Teacher 1: Blending technology with human life skills.

Teacher 2: Strict measures of assessment, emphasizing originality of content, raising awareness...

Teacher 5: Provide training, user-friendly tools, and ongoing support.

Teacher 6: Setting clear goals and agenda (schedule) and sticking to them will certainly help them self-regulate their learning.

Teacher 7: To use them properly and honestly without overreliance on them.

Teacher 8: Integrate mini-lessons on goal setting, time management, and reflection into the digital workflow. Use tutorials or walkthroughs to show how students can set learning reminders, track vocabulary growth, or log progress. Make tech-based activities feel authentic and useful so learners are more motivated to stay self-directed. Offer professional development (training days) for teachers focusing on the share of the best practices, templates, and lesson models that emphasize autonomy, goal setting, and reflection. Use badge systems, for example, to reward students and recognize effort, consistency, and personal improvement — not just test scores.

Teacher 9: To encourage the integration of technology-based instruction and to vary the tools and to make learners aware that these tools can help them to enhance their learning.

Teacher 3 and 4 did not answer this question.

The aim of this question was to invite teachers to propose improvements for making technology more effective in fostering students' self-regulated learning. Although Teachers 3 and 4 did not respond, the remaining participants offered a variety of practical and pedagogical suggestions focused on training, structured support, ethical use, and motivation.

Many teachers highlighted the importance of training and ongoing support. Teacher 5 recommended providing user-friendly tools, proper training, and continuous assistance for both teachers and learners. Teacher 8 supported this view and emphasized the value of professional development sessions where educators can share resources and strategies that promote learner autonomy and goal-setting.

The integration of self-regulation strategies into digital learning was also a key point. Teacher 6 suggested setting clear learning objectives and maintaining a structured schedule to help students manage their learning independently. Teacher 8 proposed embedding

mini-lessons on time management, goal-setting, and reflection within the digital workflow. They also recommended the use of features such as progress tracking, vocabulary logs, and reminders to support independent learning.

To boost motivation, Teacher 8 advocated for using digital reward systems, such as badges, to acknowledge students' effort, consistency, and personal growth—not just academic achievement. This approach encourages sustained engagement and fosters responsibility in learning.

Some teachers raised concerns about the ethical and mindful use of technology. Teacher 2 emphasized the need for stricter assessment standards and efforts to promote originality. Similarly, Teacher 7 cautioned against overreliance on digital tools, urging students to use them thoughtfully and responsibly.

Teacher 1 suggested that technology should be blended with real-life skill development, encouraging a more holistic learning experience. Meanwhile, Teacher 9 recommended expanding the variety of tools used and helping learners understand the educational value of these resources.

Overall, teachers recommended several strategies to enhance the effectiveness of technology in promoting self-regulation. These included better training for educators, incorporating goal-setting and time management features into digital tools, fostering responsible use, and creating engaging, learner-centered environments. The responses underscore the importance of using technology not in isolation, but as part of a broader instructional approach that empowers students to take control of their own learning.

Question Eleven: Do you believe that university policies and infrastructure adequately support technology-based instruction? If not, what improvements would you propose?

Teacher 1: It is supportive to some extent, but there should be more availability of materials.

Teacher 2: No, it is a long way to...

Teacher 3: No.

Teacher 4: The University tries to enhance the use of technologies among teachers.

Teacher 5: Not fully; need better internet, equipment, and teacher development.

Teacher 6: For the moment, our university still lacks adequate infrastructure and have no clear policy of integrating technology to improve learning. I propose having a long-term plan which considers all partners; teachers, learners, administrators to collaborate on designing effective programs that support text-based instruction.

Teacher 7: No, there should be classrooms fully supplied with laptops and projectors.

Teacher 8: Not really, it needs more use of technology in all branches and more internet access.

Teacher 9: No, I think for the policy now it's a must. I said it at the beginning; it's a must now. We cannot escape this reality. That means we are obliged to integrate technology in this structure. For the infrastructure, what is available now, I think it's not enough. We need to improve the infrastructure so that it will align with the expectations of the integration of technology-based instruction.

This question aimed to explore whether teachers believe that university policies and infrastructure support the use of technology in English language teaching. Most teachers said the support is not enough, with only (2 out of 9 teachers) saying that the university is doing something to help, while (7 out of 9 teachers) said the support is weak or missing.

The teachers who saw some support still mentioned problems. For example, Teacher 1 said there is limited help, but more materials are needed. Teacher 4 said the university is trying to encourage technology use, but this is not yet fully effective.

The majority of teachers shared concerns about the lack of tools, poor internet, and the absence of a clear policy. Teachers 2 and 3 simply said "no" without giving details. Teacher 8 added that technology is not used in all departments, and that the internet connection in classrooms is often a problem.

Many teachers gave practical suggestions. Teacher 5 suggested better internet access, more devices, and training for teachers. Teacher 7 said classrooms should have projectors and laptops to make digital teaching easier.

Teacher 6 explained that the university lacks a long-term plan. They recommended that teachers, students, and administrators work together to create clear strategies for using technology in teaching. Teacher 9 also stressed that technology is now essential in education. They said the current resources do not meet modern needs and must be improved.

Overall, most teachers think the university needs to do more to support technology-based instruction. They believe that improvements are needed in infrastructure, planning, and training. The responses suggest that real change will require strong cooperation between all members of the university and a clear commitment to supporting digital learning.

Question Twelve: Is there anything else you would like to add regarding technology-based instruction and learner self-regulation?

Teacher 1: Self-regulation is the bridge between goals and accomplishments.

Teacher 3: No.

Teacher 4: It is an interesting topic.

Teacher 5: Continuous updates and student digital literacy are essential.

Teacher 6: Ongoing training and professional development must be done regularly to reach effective results.

Teacher 7: The availability of technology tools and their wise and honest use of them determine how these tools can support learners in their education.

Teacher 8: No.

Teacher 9: Yes, I think with the Z generation it is a must with a new mode of learning. So, we are shifting from the traditional way of teaching and learning instruction to a new mode that requires from us to be aware of the expectations, the challenges of the use of technology in instruction. So, as I said these many times in this interview, there's no escape. You have to work with this reality so that we can get profit from the integration of technology-based instruction.

Teacher 2 did not answer this question.

The last question provided teachers with the opportunity to express their thoughts regarding the relationship between technology-based instruction and learners' self-regulation. Although not every participant elaborated extensively, the responses that were offered revealed significant themes concerning students' responsibility, teachers' preparation and training, and the changing nature of education in the digital age.

Several teachers shared thoughtful reflections on the value of self-regulation. Teacher 1 characterized self-regulation as "the bridge between goals and accomplishments," highlighting its central role in achieving learning success. Teacher 9 offered observations

on the transition from traditional to modern education, noting that for Generation Z, technology is no longer optional—it is a necessary part of teaching. They called for greater awareness of both the benefits and challenges that come with this shift, and stressed that adapting to this new mode of instruction is essential for educational progress.

Other teachers focused on practical improvements needed for successful technology integration. Teacher 5 highlighted the importance of updating educational content and improving students' digital literacy. Teacher 6 emphasized the need for regular professional development to help teachers stay current and effective in using technology to support self-regulated learning.

Teacher 7 pointed out that the effect of technology on learning is influenced by two primary factors: the accessibility of digital tools and their application. They stressed that responsible and ethical use of technology is essential in determining the effectiveness of digital learning.

Some teachers kept their remarks brief. Teacher 4 briefly noted that the topic is interesting, while Teachers 3 and 8 had no additional comments. Teacher 2 did not provide an answer to this question.

In summary, the additional reflections reinforce key ideas discussed earlier in the interview. Teachers recognized the growing role of technology in education and stressed the importance of training, digital literacy, and intentional use of tools to promote learners' autonomy. Their comments underline that meaningful use of technology requires both resources and a shift in educational attitudes to fully support self-regulated learning in EFL classrooms.

2.4. Discussion of the results

Students' Questionnaire

According to the results from the student's questionnaire, it reveals that the majority of Master 1 EFL students at Biskra University use TBI as a helpful tool for improving their SRL. Most students indicated that they had prior experience using digital tools in their English studies, with platforms like YouTube, online dictionaries, Moodle, and educational applications being frequently used. These tools were perceived as effective in fostering key SRL dimensions such as motivation, flexibility, autonomy, and collaborative learning. Specifically, more than a half of the respondents reported using TBI tools to plan, manage, and reflect on their learning processes, indicating an awareness of metacognitive strategies. In addition, the findings revealed a strong preference for blended learning, indicating that students favour a learning environment that integrates both traditional and digital methods. However, several challenges were also highlighted, such as technical difficulties, digital distractions, and a lack of structured instruction from teachers. While students recognise the benefits of TBI, their ability to fully engage in SRL depends on the availability of support **s**ystems and institutional funding. The results support the assumptions that TBI can promote SRL, but only if integrated properly into the learning environment.

Teachers' Interview

The analysis of the semi-structured interviews with teachers revealed valuable insights into the impact of TBI on fostering SRL from an instructional perception. The majority of teachers expressed a favorable view of integrating technology into EFL teaching, highlighting its role in enhancing learner autonomy, engagement, and access to authentic resources. They mentioned using platforms such as Moodle, Google Classroom, Zoom, and, in certain instances, AI-powered tools like ChatGPT. Teachers recognized that digital platforms facilitate SRL by allowing students to set learning goals, track their progress, and reflect on their achievements. However, many also identified significant challenges that hinder the effective use of TBI, such as insufficient training, a lack of

institutional support, and limited technological infrastructure. Some teachers admitted that, although they understand the importance of SRL, they often feel lacking in confidence or time to explicitly teach SRL techniques in their classrooms. These insights indicate that while teachers value the educational advantages of TBI, its influence on SRL is restricted by contextual and logistical constraints. The findings support the proposed assumptions that teachers perceive TBI as advantageous for fostering SRL, yet they emphasize the necessity for professional development and systemic support to achieve successful implementation.

2.5. Synthesis of the Findings

This research aimed to investigate the perceptions of both teachers and learners regarding the use of TBI to promote SRL among EFL students at Biskra University. The combined insights from students' questionnaire and teachers' interview offer a thorough understanding of how digital pedagogy intersects with learners' autonomy. The results not only support the initial assumptions but also answer the research questions by demonstrating that TBI can foster SRL through various cognitive, metacognitive, and motivational processes.

Concerning the first research question— how do Master One EFL students at Biskra University perceive the impact of using TBI on their self-regulation—the findings indicate that learners generally see TBI as a helpful tool in developing SRL. Many reported that technology enables greater independence in managing their learning, especially in planning, setting goals, and reflecting on their progress. Commonly used tools such as YouTube, Moodle, online dictionaries, and language learning applications provided learners with flexibility, immediate feedback, and access to diverse resources. Learners expressed a preference for a blended learning approach, appreciating the combination of traditional classroom methods with digital tools for their adaptability.

Regarding the second question—teachers' perceptions of TBI's role in fostering SRL—the interview revealed that most teachers believe technology encourages learners to assume more responsibility for their academic progress. They observed improvements in their engagement, motivation, and independence when TBI was effectively integrated. However, teachers also pointed out challenges such as inadequate infrastructure, lack of training, and limited time to explicitly teach SRL strategies. These obstacles suggest that while teachers are generally supportive of TBI, structural and institutional issues still restrict its full potential.

In addressing the third question—what challenges and benefits do learners and teachers encounter with TBI aimed at enhancing SRL—the findings from both groups align. They identified issues like technical problems, digital distractions, and insufficient guidance on effective technology use. Teachers echoed these concerns, emphasizing that without institutional backing and ongoing teacher training, technology integration can remain superficial and inconsistent. Nevertheless, both groups recognized significant advantages, including easier access to learning materials, increased motivation, and more personalized learning experiences. These insights confirm that the success of TBI depends heavily on effective implementation and support mechanisms.

The final question—what strategies can be adopted to optimize TBI for promoting SRL—was addressed through suggestions from participants and the implications derived from the data. Recommendations included adopting a blended learning model, providing targeted training for teachers, enhancing technological infrastructure, and designing structured digital tasks that encourage reflection and goal-setting. Both learners and teachers emphasized the importance of guided use of digital tools aligned with SRL principles.

In summary, the findings portray a clear picture: when integrated meaningfully, TBI can significantly enhance EFL learners' SRL by fostering autonomy, boosting motivation, and encouraging strategic learning behaviors. However, realizing these benefits requires addressing infrastructural shortcomings, offering comprehensive training, and carefully planning pedagogical strategies. A context-sensitive, strategic approach to technology integration is crucial for transforming digital tools into effective enablers of learner-centered education.

2.6. Limitations of the Study

The study encountered several challenges that limited its full completion. Despite efforts to maintain quality, some difficulties arose during the research. The main limitations are listed below:

1. Insufficient Access to Reliable Resources: One of the biggest obstacles faced by many Algerian students, including the researcher, is the limited access to real, reliable resources like academic books, peer-reviewed articles, and current theoretical materials. This shortage makes it really tough to build a solid theoretical foundation for research. Sometimes, it even leads to using secondary or unverified sources unintentionally, which is not ideal for academic work.

2. Lack of In-Depth Observational Analysis: Although classroom observation was part of the research design, it was not deeply analyzed due to time constraints and the study's primary focus on perceptions. This limited the ability to observe actual behaviors and technology integration in practice.

3. Delayed Responses: Although a large number of emails were sent to potential teacher participants, only a few responses were initially received. This delay

forced the researcher to personally approach teachers, politely requesting them to participate in face-to-face interviews. This process consumed considerable time and energy and could have been avoided if digital communication had been more effective.

4. Difficulty in Reaching Participants: The questionnaire was shared online, which made it hard to reach and get more students to participate. This was a major problem that slowed down the research, so the study was done with only a small group of students. Because of this, the results might have been more accurate and useful if more students had taken part. Additionally, it was observed that some students did not take the questionnaire seriously, selecting options without thoughtful consideration which affected the initial quality of the collected data.

To conclude, despite the limitations mentioned earlier, the researcher was able to collect valuable data and meaningful responses. This information helped support the validity of the proposed hypotheses and helped accomplish the main goals of the study. Recognizing these challenges also opens opportunities for future research to expand on this work with better methods and a larger scope.

Conclusion

In conclusion, this chapter has outlined the essential aspects of the research design and the analytical procedures applied in the study. The use of a mixed-methods approach was well-suited to the research goals and enabled a thorough investigation of the topic. The selection of participants was clearly established, and ethical considerations were strictly upheld throughout the process. Both data collection instruments—the students' questionnaire and the teachers' interview—were carefully constructed, validated, and

implemented to obtain relevant insights. The data analysis was carried out with methodological rigor, ensuring that the findings were appropriately interpreted in relation to the research objectives, questions, and the proposed hypotheses. In sum, the chapter delivered a coherent and reliable methodological framework, offering key insights into how TBI can influence SRL among EFL learners.

General Conclusion

Learners' ability to self-regulate has become a key aspect of modern education, particularly in language learning, where autonomy, motivation, and active engagement are all essential to success. In parallel, the integration of technology into education has brought about significant shifts in teaching and learning environments.

The aim of this study was to investigate the perceptions of EFL learners and their teachers regarding the integration of TBI and its influence on learners' SRL. Four main research questions guided the investigation, focusing on how learners and teachers perceive the impact of TBI on SRL, the benefits and challenges encountered, and the strategies for optimizing its use. It was proposed that TBI contributes positively to learners' self-regulated behaviors and that both benefits and challenges shape its effectiveness in classroom settings.

The study was conducted at Mohamed Khider University of Biskra. It employed a mixed-methods case study design, using a structured questionnaire distributed to thirty Master 1 EFL students and semi-structured interviews conducted with nine teachers. These tools provided both quantitative and qualitative insights into participants' views, enabling triangulation of the data and enhancing the validity of the results.

The dissertation consisted of two main chapters. Chapter one which is the theoretical framework was divided into two sections: section one provided an overview of TBI, including its definitions, tools, and relevance in EFL learning, while section two focused on SRL, presenting its theoretical foundations and the role of technology in supporting learners' self-regulation. Chapter Two was devoted to the fieldwork and data analysis. It described the research design, the study's sample and setting, and ethical considerations. It detailed the development, piloting, and administration of the data collection tools. The chapter presented a thorough analysis of the students' questionnaire results and the

teachers' interview responses, offering insights into how participants interact with technology in their learning and teaching practices.

The results of this study provided answers to the research questions. It was found that both learners and teachers generally held positive attitudes towards TBI. Students reported that technology supported their ability to plan, monitor, and reflect on their learning. Teachers acknowledged its potential to foster SRL but also noted challenges such as lack of digital training and institutional support. Overall, the findings suggest that integrating TBI can enhance EFL learners' SRL promoting autonomy, motivation, and effective learning strategies.

In conclusion, while the research revealed the potential of TBI to support SRL, it also emphasized the need for ongoing support, digital literacy development, and pedagogical training to maximize its benefits. Technology should serve as a complementary tool within a broader instructional framework that continues to value teacher guidance and human interaction in the language learning process.

Recommendations and Suggestions for Future Research

Based on the findings and limitations discussed earlier, the following practical and academic suggestions are proposed:

Pedagogical Recommendations

- Enhance Infrastructure: The university should invest in upgrading classroom technologies and ensure reliable internet access to create a more inclusive digital learning environment.
- Offer Teacher Training: Regular workshops and professional development sessions should be organized to help teachers effectively integrate digital tools and promote SRL strategies among students.
- Support Student Use of Digital Tools: Students should receive structured guidance on how to utilize specific TBI tools to set learning goals, track progress, and reflect on their achievements.
- Encourage Reflective Learning: Teachers should motivate students to engage in reflective activities through digital journals, self-assessment checklists, or feedback applications to foster SRL development.

Suggestions for Future Research

- Expand the Sample: Future studies should include larger and more diverse samples from various academic institutions and levels to improve the generalizability of the findings.
- Conduct Longitudinal Research: Future research could use longitudinal approaches to examine how continuous use of TBI impacts students' SRL over time.

- Focus on Specific Tools: Investigating the effectiveness of particular tools (such as Moodle, Google Classroom, ChatGPT, Zoom) in supporting different aspects of SRL would provide more targeted insights.

- Assess Professional Training Effects: Future studies could explore how teacher training in digital pedagogy influences their capacity to effectively implement TBI strategies that enhance SRL.

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Appendices

Appendix 1: Students' Questionnaire

Dear students,

You are kindly asked to answer the following questionnaire, which attempts to collect data for the accomplishment of a master dissertation under the title "An Investigation into Teachers and Learners' Perceptions towards Using Technology-Based Instruction in Enhancing Self-Regulation". Your input is crucial to this research, and your responses will remain anonymous and confidential.

Definitions of Key Terms:

1. **Self-regulation**

   Self-regulation is the ability to control one's thoughts, emotions, and behaviors to achieve goals, adapt to changing situations, and manage impulses effectively. It involves skills like goal setting, self-monitoring, and self-discipline.

2. **ICT**

   ICT is an acronym for Information and Communications Technology. It helps to connect producers and users through various digital tools such as email, e-learning, and web-based learning. It also enhances the teacher's ability to interact with students and keep them updated**.**

3. **Technology-Based Instruction (TBI)**

   Refers to the use of technology tools and resources to facilitate language learning activities inside and outside the classroom. It integrates various technological tools to support language learning processes, including listening, speaking, reading, and writing.

Section 1: Personal Information

1. **Gender:**
   - ❑ Male
   - ❑ Female
2. **Age Range:**
   - ❑ Under 22
   - ❑ 22–24
   - ❑ 25 or above
3. **Have you used technology-based instruction in your English studies at Biskra University?**
   - ❑ Yes
   - ❑ No
4. **How often do you use technology-based tools (e.g., Moodle, educational apps, online platforms) in your learning?**
   - ❑ Never
   - ❑ Rarely
   - ❑ Sometimes
   - ❑ Often
   - ❑ Always

Section 2: Perceptions on Technology-Based Instruction

5. **Do you think that the Department of Language and English Literature at Biskra University is well-equipped with enough technological materials?**
   - ❑ Yes
   - ❑ No
6. **What do you prefer?**
   - ❑ Traditional education
   - ❑ Educational technology
   - ❑ Both
7. **Which technology-based tools do you use most frequently for learning English?** (Select all that apply)
   - ❑ Moodle (Biskra University platform)

- ❑ Google Classroom
- ❑ Zoom / Microsoft Teams
- ❑ Online Dictionaries & Translation Tools (Cambridge, WordReference)
- ❑ Language Learning Apps (Duolingo, Memrise, Anki)
- ❑ YouTube (for English learning)

8. **How often does the teacher use ICTs and different teaching aids?**
   - ❑ Always
   - ❑ Sometimes
   - ❑ Never
9. **How effective do you think technology-based instruction is in enhancing your engagement in learning English?**
   - ❑ Very ineffective
   - ❑ Somewhat ineffective
   - ❑ Neutral
   - ❑ Somewhat effective
   - ❑ Very effective
10. **What are the main benefits of technology-based instruction in your experience?** (Select all that apply)
    - ❑ Increases motivation to learn English
    - ❑ Improves flexibility and self-paced learning
    - ❑ Enhances interaction and communication in English
    - ❑ Provides instant feedback on language use
    - ❑ Expands access to English learning materials
11. **What challenges do you face when using technology-based instruction for learning English?** (Select all that apply)
    - ❑ Technical difficulties
    - ❑ Limited access to reliable internet or devices
    - ❑ Digital distractions (e.g., social media, non-academic content)
    - ❑ Difficulty in managing time and staying disciplined
    - ❑ Lack of structured guidance on how to use technology effectively

Section 3: Technology and Learners' Self-Regulation

12. **How often do you use technology-based tools to plan and organize your English learning (e.g., setting goals, managing time, tracking progress)?**
    - ❑ Never

- ❑ Rarely
- ❑ Sometimes
- ❑ Often
- ❑ Always

13. **Do you think technology-based instruction helps you become more independent in managing your English learning?**
    - ❑ Strongly disagree
    - ❑ Disagree
    - ❑ Neutral
    - ❑ Agree
    - ❑ Strongly agree
14. **Which digital strategies best support your self-regulated English learning?** (Select all that apply)
    - ❑ Goal-setting and planning tools (e.g., Notion, Trello)
    - ❑ Self-assessment and feedback tools (e.g., Grammarly, online quizzes)
    - ❑ Time management apps (e.g., Pomodoro timers, study planners)
    - ❑ Interactive and adaptive language learning platforms
    - ❑ Online discussion forums and peer collaboration (e.g., WhatsApp groups, Discord)
15. **To what extent do you believe technology-based instruction helps you reflect on your English learning and adjust your study strategies?**
    - ❑ Not at all
    - ❑ To a small extent
    - ❑ To a moderate extent
    - ❑ To a great extent
    - ❑ Completely

Thank You for Your Participation!

Appendix 2: Teachers' Interview

Dear Teacher,

We are conducting research on Teachers and Learners' Perceptions towards Using Technology-Based Instruction in Enhancing Self-Regulation. Your participation in this interview is essential to our study and will provide valuable insights into the topic. With your consent, we would like to record this brief interview to ensure the accuracy and completeness of the data. We sincerely invite you to take part and contribute to our research.

Section 1: General Information

1. Can you introduce yourself and briefly describe your experience in teaching EFL at the university level?

2. What are your thoughts on the integration of technology in EFL instruction at Biskra University?

Section 2: Perceptions on Technology-Based Instruction

3. What types of technology-based tools or platforms do you use in your teaching?

4. How do you think technology impacts students' engagement and motivation in learning English?

5. In your experience, what are the main advantages of technology-based instruction for EFL students?

6. What challenges do you face when implementing technology in your teaching?

Section 3: Technology and Learner Self-Regulation

7. Based on your observations, how does technology help students regulate their own learning (e.g., setting goals, managing time, monitoring progress)?

8. Do you think technology-based instruction encourages students to become more independent learners? Why or why not?

9. What digital tools or strategies do you recommend for fostering self-regulation among EFL students?

Section 4: Recommendations and Future Perceptions

10. What improvements or changes would you suggest to enhance the effectiveness of technology in developing students' self-regulated learning skills?

11. Do you believe that university policies and infrastructure adequately support technology-based instruction? If not, what improvements would you propose?

12. Is there anything else you would like to add regarding technology-based instruction and learner self-regulation?

Thank You for Your Participation!

ملخص الدراسة

تهدف هذه الدراسة إلى استكشاف دور التعليم المعتمد على التكنولوجيا في تعزيز التعلم الذاتي المنظم لدى طلاب السنة الأولى ماستر في اللغة الإنجليزية كلغة أجنبية بجامعة بسكرة. تسعى الدراسة إلى فهم تصورات الطلاب وآراء الأساتذة حول تأثير استخدام التكنولوجيا في تطوير مهارات التنظيم الذاتي، بالإضافة إلى تحديد الفوائد والتحديات المرتبطة بالتعليم التكنولوجي، واقتراح استراتيجيات لتحسين فعاليته في التعليم الجامعي. وُضِعت هذه الدراسة ضمن منظور تفسيري، واتبعت منهجًا نوعيًا بتصميم دراسة حالة، لاستكشاف تجارب المشاركين وفهم مواقفهم بعمق. شملت توزيع استبيانات على عينة مكونة من 30 طالبًا، وإجراء مقابلات شبه منظمة مع 9 أساتذة، بهدف جمع بيانات كمية ونوعية توفر رؤية شاملة حول الموضوع. تناولت الدراسة الأدوات الرقمية المستخدمة في التعليم مثل نظم إدارة التعلم، التعلم بمساعدة الحاسوب، والتعلم عبر الأجهزة المحمولة، إلى جانب نماذج تعليمية مثل التعلم المدمج والفصل المقلوب، مع التركيز على كيفية تأثير هذه الأدوات على تطوير مهارات التعلم الذاتي. أظهرت النتائج أن التعليم المعتمد على التكنولوجيا يسهم في تعزيز استقلالية الطلاب، وتحفيزهم، وتحسين استراتيجيات التعلم لديهم، رغم وجود بعض التحديات مثل التشتيت الرقمي وقلة الكفاءة التقنية والدعم المؤسسي. وتؤكد الدراسة على ضرورة توفير تدريب ملائم للطلاب والأساتذة، وتحسين البنية التحتية الرقمية، واعتماد استراتيجيات تعليمية تدعم التعلم الذاتي لتحقيق أقصى استفادة من التكنولوجيا في التعليم الجامعي.

الكلمات المفتاحية: استقلالية المتعلم، التعليم المعتمد على التكنولوجيا، التعلم الذاتي المنظم، طلاب السنة الأولى ماستر